The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees.

VOLUME LI CHICAGO, ILLINOIS, OCTOBER 31, 1908. NUMBER 18

Original Articles

THE SUFFICIENCY OF THE OFFICIAL DRUGS AND PREPARATIONS IN THE MEDICINAL TREATMENT OF DISEASE.*

OLIVER T. OSBORNE, M.A., M.D.

Professor of Materia Medica, Therapeutics and Clinical Medicine, at Yale.

NEW HAVEN, CONN.

This is the subject that was given me by the program committee, for elucidation, elaboration or extension, hence it is not of my choosing, but the subject interests me and I hope I may interest you.

We are in the midst of an energetic endeavor to stimulate the medical schools to teach better therapeutics, to teach the students to write better prescriptions, and to give them a better understanding of the orthodox drugs and the possibilities derived from their use. It is also the object of this section, and all therapeutic societies, to present to practitioners the necessity for a better understanding of the United States Pharmacopeia and the National Formulary so that the ordering of preparations whose exact constituency is not known may become a disgrace of the past and not a perpetuity of the carelessness or ignorance of the present.

That it is utterly unimportant to the patient what name the physician gives to his disease or condition is self-evident. He comes to be cured, or at least to have his troublesome symptoms ameliorated, and while a diagnosis is positively essential for perfect therapy, fortunately or unfortunately, it is not always necessary for an amelioration of his symptoms or even, sometimes, for his cure. Consequently, many times he is as successfully treated, from his standpoint, by a quack or an ignorant practitioner as he is by a scientific physician. It is also unfortunately true that many a scientific physician, owing to his medical training and to some of the best text-books on the practice of medicine, delays the amelioration of the patient's symptoms until slow laboratorial processes have made a definite, positive diagnosis. Such diagnosis having been made, he is content to treat the etiologic cause of the condition, forgetting even the pain the patient is suffering, and thus his patient is often driven to quackery or dogmas or "patent medicines," and often improves from such treatment.

It should be taught, not only in the therapeutic departments, but in the internal medicine departments of every medical school, and no text-book on practice should be considered complete unless it teaches that the uncomfortable, disagreeable and non-eliminative symptoms of a disease must be attended to and therapeutically managed while the disease itself is being scientifically combated. It would be as unjust to accuse me of advocating the symptomatic treatment of disease, as it would be untrue, but each and every clinician well knows that it is the consultant only who can ignore the treatment of troublesome symptoms. All successful quackeries succeed because of their ability to relieve symptoms or to cause such mental suggestion as will relieve overtaxed minds, and many a loyal patient is driven to employ quackery by scientific neglect.

While I am supposed to speak on the subject of drugs, I must declare that the administration of drugs is only a small part of the management of disease, and the management of disease is the highest pinnacle of the medical curriculum. It presupposes all the physiologic, chemical, anatomic, pathologic, bacteriologic and pharmacologic knowledge that can be obtained. This knowledge is then brought to bear on the management of the disease, which means necessary hygienic changes, perhaps a change of climate, an arrangement of the food and drink, physical treatment if indicated, such mental treatment as is advisable, such medicinal treatment as is needed, and necessary operative procedures, and, altogether, this is therapeutics. The subject of therapeutics is, then, the broadest and the hardest one for the medical student to grasp, and it is safe to say that the young graduate in medicine, even after a hospital course, is less prepared in the bedside and office management of disease than in any other branch of his art.

We all approve of the growth of the healthy teaching of the ability of the mind to overcome many nervous disorders and prevent the misinterpretation of slight physical disturbances, which teaching was begun at the Immanuel Church, in Boston. It is too soon to assert that the men who are teaching this therapeutic branch of medicine will not go too far and be so impressed by their success in apparently pathologic conditions as to become mentally unbalanced, and believe that wonders can be done by the "mind cure." Psychotherapeutic instruction should be given in every medical school, and I believe that a great deal of good can be done by mental instruction of the laity by educated and able ministers of the gospel; still I think they would be better prepared to do such teaching and would teach it well-balanced if they had some instruction in pathology. In other words, it ought to be considered a prerequisite that before a minister should teach the power of the mind over the body he should have taken a course in pathology. He will then recognize his limitations and can teach good mental sense to his audiences.

As the scientific practitioners are just passing out of the age of drug annihilation and a belief that because a disease can not be cured by specifics the patient should

* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

receive no treatment, we find the necessity for a better understanding of pharmacology. Just as a mental therapist will be cured of absurd prognoses and beliefs by the study of pathology, so does a thorough knowledge of the pharmacologic action of drugs prevent a doubt of their efficiency. Hence it is absolutely necessary for every medical school to inaugurate laboratory pharmacologic instruction. The medical graduate after such a course will demand pure, active drugs, and will use them rationally, and the pharmaceutical firms must vie with each other to furnish pure, active preparations of these drugs. If these firms can improve on the National Formulary preparations let such be incorporated into the National Formulary, which should be reissued at least every five years. This is not to advise the use of ready-prepared combinations in preference to a well worked out prescription to meet the individual case, but is advised to prevent the necessity of ordering pharmaceutical preparations whose exact ingredients we do not know.

I believe that it is time to repudiate the assertion that Nature is a good physician or a good surgeon. Not that I wish to controvert the belief of ancient, medieval and modern medicine, as evidenced by the various Greek, Arabian, Latin, German and English terms, that the human organism is able to combat poisons and infections and to heal lesions. But we have now come to the time when it should be recognized that we not only must not obstruct in the human body the processes of eradication of an infection which natural metabolism has established, but that it is just as futile and just as absurd not to aid in combating an acute or chronic disease with the proper drugs, all physical and hygienic methods having been instituted, as it is to allow pus to burrow and cause serious consequences instead of properly evacuating it. In other words, natural processes are fighting just as much to establish the condition or disease or infection that is abnormal to the part where it is, as are the natural processes of the human body endeavoring to eradicate these foreigners who have invaded their stronghold. Who for one moment can think that the cancer cell is not attending to its natural function of multiplying and eating into healthy tissue, and who would allow to-day such a process to go untreated? Who would allow the diphtheria germ and its toxins to have full sway without the use of its opponent, antitoxin? It is just as absurd to declare that pneumonia and typhoid fever need no medication as it would be to declare that diphtheria needs no antitoxin and no antiseptic gargles.

With this preamble let us return to the pharmacologic activities and the therapeutic uses of drugs, and turn to the Pharmacopeia as offering active drugs of standard strengths in efficient and suitable preparations. And the first question that we must ask is, why so much that is useless surrounds the few that are so useful? Is there any practice of medicine up-to-date, is there any book on surgery up-to-date that describes every old, antedated, ancient and useless method of treatment, together with the modern proper treatment? You must answer "No." Consequently why in an associated branch of medicine, and the most necessary branch of all, do we have a book called "standard" that is loaded with antedated and almost antediluvian mixtures? Let those to whom we give authority to prepare the United States Pharmacopeia offer one that is small, compact, has only the best preparations of the best drugs, and does not keep a drug out of the Pharmacopeia rather than recognize its ability to do good for the sake of some old-fashioned fear that it may have a patented name. Then let the state boards of health frequently analyze the drugs found in the open market to see that they come up to the standard of strength. Then, and then only, can we take official drugs and have exact therapeutic possibilities from them.

While advising simplicity in prescription writing, it can not be gainsaid that the art of combining drugs or of rendering a drug less disagreeable should be taught in the medical schools. Even with this laudable object in view, however, it is not justifiable for a physician so to belittle his profession and forget rationality in his treatment of a patient, to say nothing of the enormous graft which he hands the proprietary firms from the pockets of his patients, by ordering proprietary mixtures. I do not believe that the physician who orders such preparations realizes the positive harm he often does his patients, in some instances almost amounting to criminal negligence. I take it for granted that no one in this audience deems it reputable, or scientific, or just to patients to prescribe preparations the ingredients of which are not known. This is little less than malpractice. The patient pays for our opinion. If we prescribe a nostrum, it is fraud, as he could prescribe his own nostrum without paying our fee. He seeks known advice and knowledge, and we have cheated him by giving him unknown mixtures or ignorance. Hence it is fraud, and I am not sure but that a court would award him damages should he make complaint. With the aid of an honest druggist, by means of our Pharmacopeia and National Formulary, we hardly need a single proprietary mixture in the medicinal treatment of disease.

Few physicians know the range and compass of these books. They contain sixty cerates, ointments, salves, mulls, petroleums, and collodions. Can any one doubt that with this number of greases a good sedative or stimulant ointment could not be selected, or any combination made that was desired? They also offer seventy-seven oils, waters, and liniments for external use; certainly all the rubs that there is room for on the human body. There are at least twenty-two simple and antiseptic dusting powders; certainly enough. So much for external remedies.

The Pharmacopeia contains 2 vinegars, 17 waters, 3 elixirs, 6 emulsions, 28 extracts, 85 fluid extracts, 2 glycerites for internal use, about 20 liquors or solutions for internal use, 4 mixtures, 6 oleoresins, 45 oils, 14 pills, 9 powders, 4 resins, 20 spirits, 29 syrups, 64 tinctures, 9 troches, and 10 wines. While the National Formulary contains 1 vinegar, 64 elixirs, 9 emulsions, 2 extracts, 36 fluid extracts, 4 glycerites, more than 38 solutions, 18 mixtures, 21 pills, 19 powders, 3 spirits, 37 syrups, 27 tinctures, and 10 wines. Enough, ye gods, to leave the proprietary manufacturers to seek other means of support, and to make worse any poor patient that comes in close relationship to them. Do not for one moment think that I advocate using this heterogeneous mass of preparations, but I do say that every physician can, with the aid of his druggist, select the few formulas that he will use that will be as elegant and pleasant methods of giving drugs as proprietary preparations, and more, will represent guaranteed doses of the ingredients.

While advising the use of some of the preparations above named, I do not wish to be understood as claiming that it is not better to combine one's own prescription better to fit the individual case, but these official preparations preclude the necessity for using proprietaries.

Now, what are the bugaboos that make the physician reach for the proprietary preparations? First tonics: The first drug to consider is iron, and the proprietary preparations of organic iron are legion. There is not a single good, substantiated reason why we should order a single one of them, and certainly the profit ordered by physicians to be paid by trusting patients to foreign manufacturers is unjustifiable. No iron will act any better than an inorganic iron. If there is an idiosyncrasy against it, smaller doses should be used, and, by the way, ordinarily too large doses of iron are given. The reduced iron, the mass of carbonated iron, the pill of the carbonate of iron, the saccharated oxid of iron (*Eisenzucker*) in tablets for children, the tincture of the chlorid of iron, the syrup of the iodid of iron, with ten elixirs in the U. S. P. and N. F. containing iron, and any number of other iron salts can do all in the iron line that it is possible to do. I defy any "patented" iron to do therapeutically what I can not do with one of the five first mentioned iron preparations.

Now as to beef: Is there any beef preparation made, in recommended daily dose, that can equal a little piece of steak, a little scraped beef pâté, a little chopped raw beef, or expressed beef serum? No.

As to other albuminoids and protein foods, a little milk, a little white of egg, a little oatmeal gruel, and many other simple nutriments preclude the necessity for their use, except in rare instances.

We do not need a "patented" bitter tonic. We have the compound tincture of gentian, the compound tincture of cinchona, and the tincture of nux vomica, in one to five drop doses, and we need for bitter tonic purposes no other.

As to stimulants: It is not necessary to pay for a poor "patented" sherry. We had much better order whiskey, brandy, sherry, ale, or champagne, as needed, and the patient will save money and receive better stimulation.

As to digestants: Very rarely is pepsin needed, and pancreatin is of but little value in the stomach. If they are needed, the Pharmacopeia and National Formulary offer several preparations for a choice. Even predigesting powders are furnished by these official books. In other words, the long list of properitary digestants is not needed.

We do not need the fat and oil emulsion proprietary preparations. The oil emulsions of the U. S. P. and N. F. are sufficient, if we desire them. Straight doses of cod-liver oil are better, and cream, butter and olive oil surpass any fat emulsion. We need no proprietary suspensions of oils, as the U. S. P. and N. F. offer all that are needed from turpentine to castor oil.

Tasteless quinins are mostly useless, and the various methods at our disposal of giving quinin allow us to surmount all difficulties of age and taste and we need no proprietary help other than the free-to-all elegance of the elastic capsule.

We do not need the legion of "patented" preparations of glycerophosphates and lecithin, as the National Formulary furnishes an elixir of glycerophosphates with lime and soda.

Concerning the long list of antipyretic preparations, cough mixtures, hypnotics, and nerve sedatives, there is but one thing to say, viz., that any physician who thinks he is unable to write the prescription needed for the individual who requires such medication should set to work to instruct himself in the method of writing for such drugs and arranging such pharmacally and pharmacologically correct combinations as will suit the needs of his patients. A long list of antipyretic coal-tar drugs is not needed. The official antipyrin, acetanilid, and acetphenetidinum (phenacetin) are all that need to be used. Caffein, camphor, soda, salol, and any other drug can be combined with them, if desired. As to cough mixtures: what codein, ipecac, ammonium chlorid, potassium iodid, terpin hydrate, and syrup of hypophosphite can not do, can not be done at all with drugs. Any or all of these should be given with absolute omission of the ancient, nasty, sweet and nauseating syrups. There are no combinations of hypnotics that can not be better combined by ourselves, and for much less cost to our patients.

None of this should prevent a physician from trying a new drug if he thinks it is an honest one, because we should be ever ready to make use of a valuable discovery, but never to further a fraud. Such a new drug should be ordered straight or used only in our own combination, and never in a ready-made mixture offered by the firm interested.

Nerve sedatives for hysteria and allied conditions are either useless and act by suggestion, or they carry the danger of forming a drug habit. We should write for our own patients our own prescriptions. There are various phosphorus preparations official and National Formulary, and if one thinks sumbul valuable, let him try it alone and see.

Now the various uric acid and gout curing preparations, and here fraud and credulity are rampant. The régime and extra water abolishes symptoms, if anything is done at all, and of all waters distilled water is the best. I do not intend to say that a sojourn at a water health resort is not of first-class advantage, because it is. A change of climate, a change of water, a change of food (cooked differently, hence often chemically different), a change of life and freedom from worry, and a change of exercise are the factors that do good, and not urate solvents. This is not to declare that minute doses of some chemical ingredient in certain waters, taken for a long time, may not modify metabolism; this must be acknowledged, but it does not alter the absolute falsity of the lithic acid and urate solvent promises, all of which promises are decidedly "gouty."

Next we come to the effervescing preparations, and here we should lean on the druggist. A large number of effervescing preparations are official, but any pet combination of any physician can be prepared by his druggist to effervesce at a cost much less than the same in proprietary bottles that are blazed to show the laity that they are proprietary, and unless the druggist is particularly careful, carry a lot of quack literature into the family, which is read with avidity, "as the doctor ordered it," all for a price which furnishes a splendid profit to the concerns making these preparations, but hardly enough profit to the druggist for shelving the same.

As to disinfectants: Again the Pharmacopeia and National Formulary come to meet our needs with mercuric chlorid, phenol, peroxid of hydrogen, formal-

dehyd solution, potassium permanganate, chlorinated lime, and various solutions; and the druggist is ever ready to make in large quantity, or strong for dilution, any disinfectant that we may select. Also, he can readily make any alkaline mouth wash that we may elect, if the two that are official are not satisfactory.

Now, why can we not acquire the art of writing our own prescriptions? It is only a question of a book or two, a little study, careful selection of official preparations, a few heart to heart talks with a trusted druggist, and the thing is an accomplished fact.

ABSTRACT OF DISCUSSION.

DR. J. N. MCCORMACK, Bowling Green, Ky.: The chief difficulty about all this matter is that scientific prescription writing has not been taught in our medical schools. It was not done in my day; it seems no better done now. Even with the leaders of the profession composing the faculties, the course of instruction has not been practical in most medical schools, and as a class they have constituted the least progressive element in the profession. I consider it more important to teach a student practical pharmacology and prescription-writing: the evils of commissions, divisions of fees, contract and lodge practice; how he may legitimately obtain practice, conduct his business and earn a living; the importance of membership and attendance in medical societies, and about other practical problems which will soon inevitably confront him, than to give extended courses in embryology and similar interesting but more theoretical branches. We consider this so important in Kentucky that our board will recognize no school after this year which does not provide a course in medical economics, which embraces most of these matters. I gave notice to the House of Delegates in my annual report that I intended to take this up systematically with every state board of medical examiners and student body in the country. It is my intention to urge students to avoid schools which have not the enterprise to teach such a course, and to urge boards to refuse them recognition. It is due every student that he be molded and shaped right in these matters before he is baked, even if some of the frills of modern medical education have to be omitted to do so. This will be only a benefit to future students. For those already in practice it is proposed to give blackboard exercises and other object-lesson methods a prominent place in the postgraduate course for county societies.

DR. TORALD SOLLMANN, Cleveland, Ohio: The teaching of materia medica has been justly blamed for this ignorance. On the other hand, how much good will it do to teach prescription-writing to men if they are taught to prescribe nothing in the hospitals excepting by numbers? It is important that the student should not be led to prescribe number so-and-so, but to write the formula.

DR. J. N. MCCORMACK, Bowling Green, Ky.: Such teaching is given because many college professors do not understand these things themselves, and do not see their importance either in hospital practice or in the teaching course. It is a part of the same defective system and that has always cursed medical education in the United States. The time has come for reform.

DR. F. E. STEWART, Philadelphia: In this country are several thousand graduates in pharmacy who are educated, trained, and licensed to practice this art. On the other hand, we have a large number of persons who are invading the pharmaceutic field without education, training, or license. As stated by Dr George M. Gould, "any person except a physician or pharmacist can practice medicine and pharmacy in the United States without a license." All that such persons have to do is to call themselves manufacturing pharmacists or chemists and practice at wholesale. The U. S. P. and N. F. propaganda should draw a clear line of demarcation between qualified and unqualified practitioners. It is not a question whether products are manufactured on a small or on a large scale, but whether the manufacturing of pharmaceutical preparations shall be conducted by qualified practitioners, and in conformity with standards jointly adopted by the medical and pharmaceutical professions. The present tendency is to reduce all pharmacists to the level of the lowest druggist engaged in the business. To obviate this tendency, physicians should specify the pharmacists to whom their prescriptions should be taken. Without this specification patients are liable to take their prescriptions to druggists who furnish medicines at the cheapest price without regard to quality. That is the natural tendency, and it will continue unless physicians do something more than specify U. S. P. and N. F. on their prescriptions. Physicians who believe that it is not ethical for physicians to specify the pharmacist are not acquainted with the principles of medical ethics of the American Medical Association. To remove the difficulty in the way of such specification, pharmaceutical organizations should limit their membership to professional pharmacists and place lists of their members in the hands of physicians so that they may exercise proper discrimination in selecting pharmacists to compound their prescriptions. When the Pharmacopeia requires that each 100 c.c. of finished fluidextract or tincture shall contain a definite stated amount of active principle, that does not mean that the pharmacist shall assume that his preparation is standardized because made from a standardized drug. It depends on the skill of the pharmacist or manufacturer conducting the operation of percolation whether or not 100 c.c. of the finished product contain the required amount of active principle. No pharmacist conducting the operation of percolation is in position to state that his finished product corresponds to the standard of the Pharmacopeia without assaying the finished product. No pharmacist can carry on his shelves preparations under pharmacopeial names but not conforming to pharmacopeial standards without rendering himself liable to the penalties of the various food and drug laws. If the pharmacist is not manufacturing on a sufficiently large scale to standardize his finished products he should buy them from manufacturers whose products conform to the requirements of pharmacopeial standards. The pharmacist can, by visiting the laboratories of the manufacturers, make sure that these standards are being maintained. The pharmaceutical societies should appoint committees to investigate the matter. Physicians, pharmacists and pharmacologic manufacturers should cooperate in promoting progress in pharmacology. They can do so in no better way than by joining this Section and taking part in the propaganda for elevating the standards of pharmacologic practice now being carried on jointly by the American Medical Association and the American Pharmaceutical Association through this Section in conjunction with the Council on Pharmacy and Chemistry of the American Medical Association.

ALEXANDER S. VON MANSFELDE, Ashland, Neb.: Not long ago a county society set about improving the medical profession. The members resolved that they would not order any more proprietary medicines and would prescribe the preparations of the United States Pharmacopeia. They were somewhat afraid of one another, and they signed their names. The next day they started out in good faith to prescribe the preparations of the U. S. Pharmacopeia. What happened? The druggists of that city of 10,000 inhabitants almost burned out the telephones and the telegraph wires to get preparations of the Pharmacopeia so that they could prepare the prescriptions. What is the comment on that? Not that the men who live in that beautiful little city have no brains; not that the teaching which they received in the schools was imperfect. It was mental laziness on the part of these physicians that caused the disuse of the Pharmacopeia. My good friend from Bowling Green is going to tell them to mend their ways and to educate the young men not to do as the older ones have done. The young minds are going to take care of themselves, I warrant you. The young men wonder why we were ever permitted to practice medicine! You men with gray hair, why don't you mend *your* ways? I have been a teacher in a college off and on for thirty years, and men who were my students know more in a minute than I know in a year! Go home, you men here, go to your several counties and do what we have done

in our county. We warned the members of our county society that if they did not quit prescribing proprietary medicines and go back to the Pharmacopeia preparations their names would be dropped; they would go out of the county society flying, and ere long, too; during my life time possibly.

DR. ROBERT HATCHER, New York: I wish to corroborate what Dr. Sollmann said about hospitals contributing to this condition. Every man who goes through Bellevue Hospital, in New York, remembers one mixture there, universally called the "early bird." The name is so suggestive that the student never forgets it. There are hosts of these remedies constantly used; some go by numbers, some by catchy names. I have never yet seen a student who had used the "early bird" who knew what was in it. When asked what it is he says, "I don't know; the pharmacist knows."

DR. J. N. JENNE, Burlington, Vt.: Why do the teachers of these subjects in the medical schools give instruction on other than pharmacopeial remedies? It is because they know that the student who goes out with no knowledge of the extra-pharmacopeial remedies and preparations would stand little chance of success before state boards. The teacher is no longer free to give instruction in the use of such remedies as he may esteem essential to the student, in order to make him a good therapeutist, but he is called on to prepare the student to pass a successful examination before any and all of these boards, unfortunately not of one mind in this matter.

DR. EMANUEL MANKO, Kansas City, Mo.: I was a pharmacist in Philadelphia in 1895; I was graduated at the Philadelphia College of Pharmacy. During that time I had charge of the prescription department of Bullock and Crenshaw. Physicians were prescribing a preparation known as antifebrin, known to-day as acetanilid and worth to the manufacturer about three cents an ounce. They charged at the time $1 an ounce. You can see what a tremendous profit these men make. Aubergier's syrup of lacuearium was supposed to be free from morphin. It is acknowledged, since the Food and Drugs Act came into force, that it contains morphin. Another evil that has crept into the drug business is the sale of liquor. There are druggists wholly unfit to be druggists largely on that account, and I blame that more than anything else for the retrogression of the drug business.

DR. J. M. PATTON, Chicago: As a teacher of medicine for about twenty-five years and as a hospital man for nearly that length of time, I have had a good deal of interest in this question under discussion. There are two phases of it which are of immediate interest to us as physicians: how to get at the root of the trouble, and how to do away with the practice of prescribing these proprietary remedies. I heartily endorse what Dr. McCormack has said about the root of the difficulty being in the teaching of medicine. The present-day graduate is more deficient in his knowledge of prescribing than in any other one branch of his medical education. When you examine candidates for hospital interneship have them write a most erudite paper on the technicalities of diagnosis; then have them try to put 20 drops of tincture of digitalis in a capsule, and you will be convinced that they are not fit to prescribe for the patient on whom they have already made a diagnosis. Most of these students have no knowledge of the physical properties of drugs; they do not know what a given mass would look like if made up and into what size capsule it would go. At the same time they can detail the physiologic effects and incompatibilities of the drugs they are using. It lies with the department of therapeutics largely, in the curriculum; secondarily with the department of clinical medicine to correct these faults. I believe that the medical schools should be required to give a definite course in pharmacology and prescribing. Their students should be required to pass just as strict an examination in these branches as they do in clinical medicine, in the various departments of diagnosis, etc. I also endorse what Dr. McCormack has said regarding a propaganda through the state societies. I believe that if they would energetically demand that all candidates for state certificates be required to demonstrate their ability along this line much of this trouble would be avoided. I believe that the efforts of the Association are already bearing fruit in preventing the prescribing of proprietary mixtures. A well known druggist in this city told me that he was not putting up more than one-fifth or one-sixth as many prescriptions for proprietary mixtures in the last six or eight months as he did four or five years ago. He told me, too, that whereas he used to buy a certain patent preparation by the great gross he now buys a quarter of a dozen at a time. He attributed this largely to the propaganda of the American Medical Association against the prescribing of proprietary mixtures and in educating the public against the use of proprietary medicines.

DR. DANIEL M. HOYT, Philadelphia: The official names of National Formulary preparations seem to me unnecessarily complicated and difficult to remember. These preparations were discussed at one of our Philadelphia meetings recently. I heard only one physician use the National Formulary names. The older proprietary names were usually substituted. It is now often difficult to obtain the preparations when they are prescribed. The other day I prescribed "Fluidextractum Rhamni Purshianæ Alkalinum N.F." The prescription went to New York City. The patient came back to me, stating that the druggist had said that he had sent all over the city for the preparation and finally had to put it up himself. I believe the prescribing of official preparations to be important because it creates a demand for preparations having the standard of the Pharmacopeia and National Formulary, rather than of any manufacturing chemist.

DR. ARTHUR T. MCCORMACK, Bowling Green, Ky.: After the first publication of the remarkable findings of the Council on Pharmacy—findings at once disgraceful to our profession and of the greatest danger to the public—this whole matter appealed to the organized doctors of Kentucky as a question of the first practical importance, and as a result of our work we now have a large part of our 4,100 medical men actually doing the things that you are talking about. It would be well if those present who need none of this propaganda—to whom even the splendid paper of Dr. Osborne is no revelation—could go back home and through their own and adjacent county societies multiply it so that its influence could reach the stay-at-homes, so as to get both druggists and doctors so interested in these matters that they will demand enough information to enable them to understand them. Most of the men using the dishonest mixtures—proprietary or not—of unknown composition, are honest men, but ignorant. If they can but be made to understand the danger of their ignorance to their patients we shall some time have only the right sort of doctors in the United States.

All this applies equally to the druggists. If our profession but demands it, we will no longer have venereal diseases treated by the class of men who are unable to compound the National Formulary preparations. These twin disgraces to the drug trade can be gotten rid of only by education of the druggists by the doctors. The man who sells alcohol, or morphin, or cocain over his counters to women and children who are ignorant alike of the contents of his mixture and of the ailments from which they suffer, is a far worse man than the saloon-keeper who sells pure liquor or pure beer to men who know what they want. If the doctors understand this question they can educate the druggist if they will. I have little respect for the influence of the physician who writes a prescription if he can not send his patient to an honest, competent pharmacist to have it filled. In Bowling Green to-day—and in most Kentucky towns—most of the doctors are so controlling their prescriptions that competent men fill them, and if the right sort of druggist is not in their county they purchase and dispense their own drugs, as they should. The doctors are responsible for the whole condition. Good men say that they can not keep their patients from going to druggists they know to be dishonest "because that druggist is one of my patients." One has no more right to send a patient to such a druggist than to send a friend to an insolvent bank. Either is a breach of

trust. In the name of our state association our president sent a personal letter to each of the 4,100 registered physicians, telling him what the Council on Pharmacy was doing. Our councilors carried the message to all who could or would hear—and some were deaf in their proprietary ear too. To each one was sent a postal card, which, when signed, pledged his word of honor as a gentleman and physician that he would no longer use any medicinal preparation of whose contents he was not informed by the highly scientific and honorable body created by the American Medical Association, the Council on Pharmacy, unless it was an official preparation. There are to-day only about 300 doctors in Kentucky who can write a prescription for the nostrums without the Lord at least knowing that they have violated a pledge of honor. Besides this, we have pushed the excellent Manual of the Pharmacopeia, prepared by THE JOURNAL, until it is in the pockets of four-fifths of the doctors of Kentucky as a constant ready reference, so that as they ride from patient to patient they may have an opportunity to consult its pages and learn now some of the things about pharmacology and materia medica which the teachers in their colleges failed to put before them at the proper time. Besides, the "New and Nonofficial Remedies" and other publications of the Council have been placed in the hands of our members, and our State Board of Health has mailed 12,000 copies of the "Great American Fraud" reprints from Collier's to prominent laymen all over the state. I have heard men say: "We think that the druggists should furnish us these things." The druggist ought to furnish us with nothing except what we pay for!

DR. C. S. N. HALLBERG, Chicago, Ill.: Acting on the precedent set by the Philadelphia Branch of the American Pharmaceutical Association at the meeting in Atlantic City a year ago, the Chicago Branch of the American Pharmaceutical Association had a display of preparations. These preparations are made mostly by students, and I dare say that if you compare them with any other manufacturers' exhibits in the building you will find that they compare favorably. So that gives the lie to the charge often made by the travelling agents that pharmacists can not prepare these preparations. They can if they want to, if fairly competent, honest and careful. At the meeting in Portland three years ago a committee of reference and resolutions reported resolutions to this Section in which the statement was made that "the nomenclature is the crux of the proprietary medicine situation." As long as physicians prescribe medicines by their euphonious names they are simply playing for the "patent medicine" men. They should have remembered to write, for example, dimethyl-phenyl-iso-pyrazolon instead of the patent name antipyrin, and instead of urotropin they should write hexamethylenamin. If they can remember the name of the diseases described by Dr. Terry here yesterday (trypanosomiases and spirilloses) there is no reason why they should find difficulty in writing hexamethylenamin or dimethyl-phenyl-iso-pyrazolon. There is more self-medication created by the physician writing the proprietary names than by any other method, and the physician must realize that if he wants to have the great convenience of writing for ready prepared medicine an elixir or synthetic chemical, he must sacrifice himself sufficiently so as to write the full name, not the patent name. Otherwise, he is taking great chances because these proprietary pharmaceuticals or synthetics are just as bad for the public as Pierce's or Peruna. There is no distinction between them in the wholesale drug list, they all come in the same alphabetic order.

DR. OLIVER T. OSBORNE, New Haven, Conn.: Let the next Committee on Revision of the Pharmacopeia put official abbreviations after those long names and the matter is settled. As a teacher of materia medica, pharmacology and therapeutics, I find that it is difficult to compel students to write the long pharmacopeial names. Our students at Yale begin to study materia medica in the second year, and study pharmacology all through the third year. At the end of the third they write better prescriptions than at the end of the fourth, and at the end of the fourth they write better prescriptions than after they get out of the hospital. That is no fault of the colleges. It is up to the dispensaries and hospitals to finish what we aim to teach, viz., the individualizing of all patients and not prescribing by numbers.

I investigated the marks on materia medica in the state examinations. I found that in Connecticut the marks were low. It seemed a reflection on me and my department that the lowest averages of any of the examinations were in materia medica, and the young medical men took the examinations after two years of hospital work. I investigated some of the other states and found the same thing to be true, and then I tabulated for fifteen years the different colleges and the examination marks in materia medica and pharmacology in Connecticut. I won't say what I found out, but I did not feel as badly as I did before. Some of our best colleges in the United States had marks in materia medica away down below our second grade colleges, showing there had been in these colleges too little time devoted to the study of materia medica and therapeutics. Our students in the second year have a course of pharmacy demonstrations. Between the end of the second year and the following Christmas of third year every individual man spends fifty hours in the prescription department of a city drug store, under the instruction of the assistant demonstrator of pharmacy. The student prepares a certain series of pharmacopeial preparations and sees the prescriptions that come into the store. These prescriptions are copied into notebooks and the notebooks are handed to me. The physicians' names are always omitted. The greatest pleasure I have is in marking off the many proprietaries used and correcting positive errors. This is a demonstration to students that is hard to beat.

DR. M. H. FUSSELL, Philadelphia: There is at least one large dispensary in this country which sees over six thousand patients a year, in which the prescriptions are not given by number and are not given by titles of ready-made prescriptions.

ARSENIC IN DISEASES OF THE SKIN;

WITH OBSERVATIONS ON SODIUM CACODYLATE AND ATOXYL.*

M. B. HARTZELL, M.D.
PHILADELPHIA.

The history of arsenic as a remedy in diseases of the skin practically begins with the opening of the last century. It is true that scattered references to its use in cutaneous eruptions of various kinds may be found in medical literature long prior to this period, but its introduction into dermatologic therapeutics was due almost entirely to the writings of English physicians in the early years of the nineteenth century. One of the earliest writers to recommend arsenic in diseases of the skin was Dr. Thomas Girdlestone, who, in a letter published in the *Medical and Physical Journal* of London in 1806 reported "some hundreds of cures of lepra, lichen, prurigo, psoriasis, etc." Its use soon spread to the continent, especially to France, where it speedily became a favorite remedy in every kind of cutaneous affection. In France Rayer found that arsenical preparations were especially useful in certain chronic eczemas of the scrotum, anus and labia, but, strange to say, he regarded them as sometimes dangerous in bullous affections, a class of diseases in which, according to later writers, arsenic displays most strikingly its remedial powers. He also found them sometimes required in various forms of lichen, but thought they were often abused in psoriasis, although likewise sometimes used with success. While this author regarded arsenic as of "incontestable use" in various forms of cutaneous disease, he was by no means so enthusiastic as some of

* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

his successors. He formulated careful rules as to its indications and contraindications, advising small doses and the immediate suspension of the remedy on the appearance of untoward effects.

Cazenave, Bazin and Devergie regarded arsenic as a more or less useful medicament in various diseases of the skin. Devergie thought it especially useful in the squamous affections, but he also believed that benefit was to be expected from it in certain forms of eczema.

The most enthusiastic advocate, however, of arsenical medication in cutaneous diseases was Thomas Hunt. This author believed that there were few diseases of the skin in which arsenic might not be used with benefit, and, as he regarded it as a harmless remedy, advised that it should be pushed until symptoms of its toxic action appeared.

Erasmus Wilson thought that there was "no remedy more valuable in cutaneous medicine than arsenic." He looked on hyperemia of the conjunctiva as evidence of the saturation of the system with the drug, and so long as this hyperemia did not increase it might be continued. He declared there was "no age and scarcely any circumstance under which arsenic may not be administered when employed with judgment."

Hebra was far from accepting unchallenged the enthusiastic recommendations of his English and French predecessors and contemporaries, many of whom found in arsenic a remedy for every cutaneous disease. He especially criticized the practice of Hunt in using it freely as being highly dangerous. While he admitted its usefulness in psoriasis and possibly in lichen ruber, he thought it was but little likely to be of service in eczema.

In consequence of the enthusiastic writings of the English and French dermatologists of the first half of the last century, arsenic had an enormous vogue in the treatment of diseases of the skin, and there were few affections of this tissue in which it was not administered. Owing probably in part to the great influence which Hebra wielded in dermatologic matters during his active career, its popularity began to decline in the last quarter of the past century and at the present time its use is very much restricted indeed as compared with that of fifty years ago.

ECZEMA.

There is a general agreement at the present time that arsenic should never be employed in acute inflammatory conditions of the skin. In these it is almost always without exception harmful; and this excludes its use in all cases of acute eczema. But there is not the same agreement about its efficiency in the chronic forms of this affection. Hardy, whose Traité de Maladie de la Peau appeared in 1886, still adhering to the traditions of the French school, thought that arsenic was the medicament *par excellence* in the treatment of eczema, upon condition, however, that it was administered at the proper time. He believed that it was of incontestable value in eczemas which had lost their acute character, especially in the dry and scaly forms.

Besnier, on the other hand, writing exhaustively on eczema in La Pratique Dermatologique, declares that the action of arsenical medication in true eczema has been very much exaggerated, and that it is excessively abused. He thinks its action neither specific nor universal, nor constant, nor uniformly favorable. He regards infancy as absolutely contraindicating its administration. Crocker has found it "a most disappointing drug in eczema." Unna thinks it is frequently useful in very dry pityriasiform and callous eczemas, particularly if the skin is anemic and the hair dry, but it is always an uncertain remedy. Duhring regards it as "unquestionably of benefit in some cases, most valuable in the chronic papulo-squamous forms." Hyde and Montgomery think it an uncertain remedy, aggravating as many cases as it relieves; but they, too, think that its value in the chronic papular and scaly forms of the affection is undoubted.

From the foregoing quotations from some of the most recent standard text-books, French, English, German and American, it is evident that opinions as to the usefulness of arsenical medication in eczema are pretty evenly divided. Most observers agree that it is at best uncertain, and that, if it is useful at all, it is only in the very chronic forms characterized by dryness and desquamation. My own experience with it in eczema would lead me to place very little reliance on it. I do not recall a single instance in which it seemed to be of the slightest use, although I have tried it in a fair number of cases of chronic eczema in which other treatment had not produced satisfactory results.

PSORIASIS.

Whatever difference of opinion there may be about its usefulness in eczema, dermatologists are practically of one mind in attributing to it more or less efficiency in the treatment of psoriasis. It is in this disease that it displays its remedial uses most brilliantly, but while all admit its usefulness, they also admit that it frequently proves disappointing. It is by no means adapted to the treatment of every case and unless used discriminatingly it will be sure to disappoint its users as often as it meets their expectations. It should always be withheld when the eruption is markedly hyperemic or when it is spreading rapidly. In such cases it always increases the patient's discomfort and seems to increase the eruption. It undoubtedly does best in recent cases, or in those which have not previously had arsenical treatment. Devergie long ago advised that it should not be given in old cases in which it had already been employed.

LICHEN PLANUS.

Although occupying a much less conspicuous place in the treatment of lichen planus than formerly, it is yet regarded by most authors as a very useful remedy in the chronic forms. Kaposi, and indeed all the Vienna school, give this medicament the first place among the internal remedies useful in this disease. Jarisch thought that in the treatment of the various forms of lichen the chief rôle belonged to arsenic, notwithstanding all that had been brought against it in recent years. Stelwagon thinks it has a directly specific effect in some cases. Crocker, on the other hand, scarcely ever uses it, having replaced it with other, and, as he believes, better remedies. My own experience leads me to assign it a foremost place among the internal remedies useful in the treatment of chronic lichen. I find it especially serviceable in the cases in which the eruption occurs in limited areas, forming more or less scaly patches and in which there is little or no itching. In the cases in which the greater part of the skin is involved, and in which there is marked pruritus, it is apt to increase the latter and seems to influence the course of the disease but little. In such cases other remedies, such as the various salicylates, will be found more useful than arsenic.

PEMPHIGUS.

Mr. Jonathan Hutchinson has declared that arsenic is a specific in chronic pemphigus, but few other authors of the present day are willing to go so far. It is generally regarded, however, as one of the most useful, if not the most useful, internal remedy in this malady. While a cure can not be expected from its use, it undoubtedly does diminish the liability to relapses, lengthening the interval between the outbreaks of the eruption often very decidedly. In a case of chronic pemphigus under my observation during the past two years, so long as arsenic was given in considerable doses the patient was practically free from eruption, but when it was suspended for even a short time a new crop of blebs soon made its appearance.

DERMATITIS HERPETIFORMIS.

Much the same may be said about the use of arsenic in dermatitis herpetiformis as in pemphigus. It frequently exhibits a decidedly inhibitory influence on the disease, controlling the outbreaks but not curing it.

SARCOMA OF SKIN.

There is considerable evidence to show that arsenic, especially when employed hypodermatically, is sometimes useful in sarcoma of the skin and more particularly in that variety first described by Kaposi under the name of idiopathic multiple hemorrhagic sarcoma. Köbner has reported the cure of two cases, and De Amicis, who treated thirteen cases in this manner, obtained essential improvement in two, arrest of the disease in four, almost complete recovery in one and an entire cure of a boy 15 years old, this last after 100 injections. In view of these reports, arsenic should always be tried in this affection. In the case of idiopathic hemorrhagic sarcoma, reported elsewhere,[1] which has been under my care for the past year, arsenic by the mouth, with the local use of the *x*-ray, has been followed by very favorable results. The area involved in the disease had been slowly but steadily enlarging, new lesions appearing from time to time some distance from the original patch on the foot, but since the adoption of the arsenic treatment the further spread of the malady seems to have been arrested.

MYCOSIS FUNGOIDES.

In a small number of cases of mycosis fungoides arsenical treatment has seemed to be of use in favorably modifying the course of the disease, and Köbner and Geber have both reported a cure, but in the opinion of most authors but little is to be expected from such treatment in the majority of cases. Since in both sarcoma of the skin and mycosis fungoides some of the lesions not infrequently undergo spontaneous involution, it is often exceedingly difficult in any individual case to determine positively just how much of the improvement occasionally noticed is due to treatment.

In recent years a number of new arsenical compounds have been brought to the notice of the profession by enterprising manufacturers for which more or less extraordinary therapeutic properties have been claimed. Chief among these are cacodylic acid and its sodium salt, and quite recently atoxyl, a compound of arsenic and anilin, the former containing the equivalent of 55 per cent. of arsenic and the latter 24 per cent. By means of these new compounds enormous quantities of arsenic may be introduced into the system without toxic effect, and owing to their great solubility and the non-irritating character of their solutions they are particularly adapted to hypodermatic use.

1. Jour. Cutaneous Dis., March, 1908.

SODIUM CACODYLATE.

My experience with sodium cacodylate has been limited to its use in ten cases of psoriasis of the ordinary type and of average severity. It was given by the mouth, in doses varying from ½ to 1¼ grains, repeated three or four times a day. In three of the ten cases more or less improvement was noted after the larger doses had been reached, but this improvement was not greater, nor did it appear earlier than after the use of arsenious acid or Fowler's solution. In one of the cases, a woman 27 years of age, in which there was at first improvement, numerous lesions appeared while she was taking ¾ of a grain, three times a day; this patient also complained of being "very nervous" after taking the drug for a period of two weeks. In one case the patient refused to continue the remedy because of the very offensive odor of garlic which it imparted to her breath, and in another case it had to be discontinued because of a severe diarrhea, although it was well borne in all the other cases. After a few months' trial it was abandoned because, while it produced some improvement in some of the cases, it did not seem to possess any real advantage over the older well tried remedies.

ATOXYL.

In 1902 Schild[2] reported a series of 75 cases of various diseases of the skin treated by hypodermatic injections of a recently introduced compound of arsenic and anilin named atoxyl. In all the cases of psoriasis treated by this remedy, a favorable influence on the eruption was noted. In a case of xanthoma diabeticorum the eruption disappeared completely after 22 injections, and 13 out of 14 cases of lichen were cured. In a second series of 50 cases published, a few months later,[3] including such diseases as psoriasis, dermatitis herpetiformis, pemphigus, lichen, equally favorable results were observed. Biringer,[4] von Zeissl,[5] Moller[6] and others have reported equally gratifying results from the use of this remedy in diseases of the skin, the curative effects being especially marked in psoriasis and lichen.

During the past three months I have used atoxyl in eight cases of psoriasis in the wards of the Philadelphia Hospital. In every case it was given hypodermatically in doses of 25 to 50 minims, of a 10 per cent. solution, at intervals of two or three days, the injections being made into the gluteal muscles.[7] During the treatment all external remedies were suspended. In all of the eight cases more or less improvement in the eruption was observed, the improvement usually beginning after the third or fourth injection. In one case, after six injections with beginning improvement, the treatment was suspended for two weeks; during this period new lesions began to appear and continued to do so until the resumption of treatment, when the eruption again began to undergo involution. In the most extensive case of the series in which the eruption was well nigh universal,

2. Berliner Klin. Wchnschr., 1902, No. 13.
3. Dermatologische Ztschr., 1903, No. 1.
4. Therapeut. Monatschr., August, 1903.
5. Wiener med. Presse, 1903.
6. Berliner Klin.-therap. Wchnschr., 1904.
7. For carrying out the details of this treatment and the preparation of the notes, I am indebted to Dr. F. C. Knowles, assistant dermatologist to the Philadelphia Hospital.

improvement was noticed after the fifth injection and this improvement continued until the fourteenth, when somewhat suddenly new lesions began to appear on all parts of the body. After the seventeenth injection the eruption again began to show signs of improvement, the new lesions, as well as the old, growing paler, but the patient leaving the hospital the treatment could no longer be continued. Two weeks later the patient returned to the hospital, and it was then noticed that the eruption had disappeared completely from the hands and arms and was much improved on the rest of the body. In a young woman, 18 years old, the eruption had practically disappeared after twenty-six injections. The greatest number of injections given any one case was twenty-seven, the treatment extending over a period of two months. In this case there was also almost complete disappearance of the eruption.

It will be observed from the foregoing summary that while every one of the eight cases responded favorably in some degree, in only two was there anything like an approach to a complete disappearance of the disease. This is not a very brilliant showing, especially when compared with the results reported by Schild and others, but it should be remembered that in my cases the atoxyl was given alone, while in the cases treated by Schild the usual external remedies were employed conjointly with the atxoyl injections and a part of the cure at least is fairly attributable to the local treatment.

In addition to these cases of psoriasis I have recently had an opportunity to try atoxyl in a severe case of pemphigus, occurring in a man, 68 years old. Before coming under my care this patient had been given considerable quantities of Fowler's solution, without controlling the eruption, until severe abdominal pain and diarrhea compelled its suspension. At first a daily injection of 30 minims of a 10 per cent. solution was given, and this was continued for about one week. At the end of this period there was a marked improvement in the patient's condition; new lesions had ceased to appear and the old ones were drying up. The atoxyl was now stopped through some misunderstanding and there was shortly a new outbreak of blebs on all parts of the body. The injections were then resumed, this time two of 30 minims each were given daily at intervals of twelve hours, and at the end of one week the disease again seemed to be under control. At the present time the patient's condition is better than any time since the beginning of the disease. Notwithstanding the large quantity of the drug taken, the only toxic symptom noticed was marked tremor of the arms and legs, which came on after 6 grains a day had been taken for six days; but this promptly disappeared with the temporary suspension of the treatment.

From my experience, limited though it is, I am led to conclude that atoxyl, like sodium cacodylate, does not possess any therapeutic properties not to be found in arsenious acid, Fowler's solution or the arseniate of soda. Owing to its great solubility in water and freedom from irritant properties, it is, however, especially adapted to hypodermatic use, a method of using arsenic often preferable to administration by the mouth and one which usually gives superior therapeutic results.

In conclusion, I desire to say a word or two about an untoward effect of arsenic which deserves the serious consideration of every one who essays to use this potent drug in chronic diseases. It is now well established that the long continued use of arsenic, especially in considerable doses, may be followed by circumscribed keratoses on various parts of the body and more particularly on the palms and soles; and Mr. Jonathan Hutchinson some years ago called attention to the fact that epithelioma may develop at the site of these keratoses, an observation which has since been confirmed by a number of other observers, so that there are now at least twenty cases of such arsenical epithelioma to be found in literature.

WORK CURE.*

ADDISON S. THAYER, M.D.
PORTLAND, ME.

Before we began the study of psychology and of so-called mental philosophy, many of us over-rated the value of that kind of knowledge. The science of mind, the study of wisdom—these surely should have power to teach a man how to think and how to live.

If we were disappointed—those of us who looked for practical guidance in the psychologic and philosophic teachings of twenty years ago or of forty years ago—we may note to-day in the work of psychologists qualities of promise and of partial attainment—precision, modesty, enthusiasm, practicality. To illustrate, let me quote this one suggestion by William James

We live subject to arrest by degrees of fatigue which we have come only by habit to obey. Most of us may learn to push the barrier further off, and to live in perfect comfort on much higher levels of power.

Scientific psychology is receiving a self-conscious increment, although a small one, from pseudoscientists, from men of one idea, from quacks, who successfully apply, by methods which are repulsive and ignorant and unsound, the soundest of scientific principles; and psychology is seeing and admitting its indebtedness to quackery.

The millions of dollars which have gone to build temples to the honor of Mrs. Eddy, and the millions in medical fees paid to Christian Science healers, constitute a costly demonstration of one permanent scientific fact—that mind-cure is practically useful. Whoever pays the price, this knowledge is ours.

Keenly aware as we are of the value of the psychotherapeutic principles which Mrs. Eddy and her followers have hit on, our estimate of the absurdities of the cult still lacks the proper perspective. Denial of the existence of pain continues to have for us a semblance of reprehensible error, while the average layman sees in such an idea a huge opportunity for good natured ridicule.

The man in the street is also relatively more ready than we are to take the next step in advance in psychotherapeutics. He is vastly entertained by the mental picture of a Christian Scientist cheerfully oblivious of toothache, but he also soberly assents to the psychologic proposition that any man who has a toothache suffers less if he keeps busy. When our typical therapeutic juryman hears evidence that the Earl of Dunmore spent seven months in close communion with bubonic plague, and escaped infection by practicing the precepts of Mrs. Eddy, the evidence is accepted for only a little more than it is really worth. But when testimony is adduced to the effect that one of the ablest men of our time, finding

* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

himself on the verge of a nervous breakdown, puts himself in the care of an ex-prizefighter, whose method of treatment is believed to depend mainly on strenuous muscular exercise, the resulting restoration to health is accepted by our juryman as fact, and the method of restoration appeals to him as eminently sensible.

The psychotherapy which nows holds the interest of some of the brightest men in our profession, defined and clarified by the teaching of Professor Dubois, is often lacking in the practical application of this sound, saving, commonplace psychologic law: Nature abhors a mental vacuum. You can't drive out morbid thoughts and keep them out, unless you fill their places with thoughts that are more healthy.

In the treatment of hysteria, as in pedagogy, suggest that an idea is erroneous and you sometimes rivet that idea all the more firmly in the mind. Worry is an endless chain. Tell a man not to worry, and he worries for fear he may worry. He is afraid that he has decided wrongly, but is doubtful whether the opposite decision would be really right.

Our therapeutic purpose is seldom accomplished by telling a patient not to be afraid. To clear the tracks, however, we may rouse his sporting instinct; ask him what is the worst thing that could happen if he decided wrongly and stuck to the wrong decision; then sidetrack his morbid thoughts by giving him no time for introspection; awaken objective interests; make him play the part of a cheerful, active man; and because he is active, he will presently become cheerful.

For therapeutic substitution, Dr. Joseph Collins[1] suggests a study of Plato's philosophy. Dr. Herbert Hall[2] recommends the use of the hand loom to call out creative activity in mind and muscle. Whether the instrument be a potter's wheel or a pair of field-glasses pointed at a bobolink, a golf stick or a garden rake, a wood carver's tool, a fishing rod or a camera, is of minor consequence, if the neurones behind the nerves are aiming out and not in. The best work is play, the best play is work, and both are gaining recognition as means of cure.

Sometimes, for some people to spend three hours at the theater is hard labor. A vigorous opponent at tennis may be a severe taskmaster. One's guide in the woods may rebel at the work which his employer regards as merely strenuous sport. For therapeutic diversion, at least a part of the day's régime will naturally include, if possible, some form of neuromuscular activity, preferably in the open air.

The invention of the medicine ball was probably not the earliest conscious effort to use the curae of Adam as a means of cure; but even now the literature of the subject is relatively meager. Among the first to discuss the value of occupation as a means of therapy were the superintendents of asylums for the insane. As is natural, where the need is greatest, the means of supplying the need have been most fully appreciated; and it has been in the treatment of the insane, and of epileptics, and in the education of the feebleminded that the systematic use of occupation has hitherto shown most striking results.

Although the primary purpose in providing work for inmates of public asylums was to reduce the cost of support through getting done by patients rather than by paid helpers certain parts of the labor of the farm, the laundry and the various repair shops, every observer of the results of this plan has noted also the incidental effect which work has had on the worker.

More than twenty years ago, Dr. G. A. Blumer,[3] who at that time was superintendent of the State Hospital at Utica, N. Y., published observations of the palliative and occasionally curative effects of manual occupation. Dr. Blumer's faith in work as a means of cure apparently grows with experience. In his report for 1908, as superintendent of the Butler Hospital, Providence, R. I., he says it often happens that "improvement seems to date from the first time the patient entered a shop or workroom."

In the treatment of epilepsy, manual training and the varied interests of colony life have now a value so fully demonstrated, that the example set by the states of New York and Massachusetts, at Sonyea and at Palmer, is creating similar institutions in other progressive states.

So, too, in the education and management of the feebleminded, systematic manual labor has won for itself a place of unquestioned importance.

Idiots and epileptics and lunatics are many; but all together they are less numerous than the victims of nervousness—the people afflicted with lesser grades of psychasthenic and neurasthenic inadequacy, who become devoted epicures of their own emotions, and who claim a large share of the attention of every general practitioner and of every specialist.

The psychoanalytic methods of Freud and Jung, even when employed with subtlety and success for tracing a morbid habit of thought back to the emotional trauma in which it began, constitute only a preliminary procedure, to be followed by measures which are synthetic and restorative. Moreover, psychoanalysis is sometimes dangerously suggestive.

At the Adams Nervine Asylum, Jamaica Plain, an endowed institution, the privileges of which are restricted to residents of Massachusetts, and to patients who are not insane, a workroom has been in operation for two years. "It has furnished a department in which the atmosphere of illness is distinctly lacking and where a spirit of interest in tangible and practical occupations is present. Discussion of symptoms is entirely forbidden. It has convinced patients that they can do things worth while, although they have long been possessed of the contrary notion." The resident physician, Dr. D. H. Fuller, finds this form of treatment increasingly useful.

At Katonah, forty miles from New York City, Dr. E. A. Sharp is using the farm and the workshop, the toboggan shute and the saddle, as means of cure.

During the past nine years, Dr. Philip King Brown, of San Francisco, has made use of occupation as a means of therapy, in private practice, and also at his sanitarium in Santa Barbara. Dr. Brown has used basketry, sloyd and carpentry, the carving and stamping of leather, botany, gardening, ornithology, geology and even astronomy—"any occupation which will train the patient's mind to run naturally in a different channel. It is not so much the work," he says, "as the way you inspire the person to take it up. The psychic influence is without question the largest part. That form of work is best which interests the patient and leads him on to more and more thought of things outside himself."

These principles, which include a wise and salutary neglect of subjective symptoms, have been practically ap-

1. Am. Jour. Med. Sci., February, 1908.
2. Boston Med. and Surg. Jour., Jan. 12 and July 13 ,1905.
3. Am. Jour. of Insanity, 1897, vol. liv, No. 2.

plied at Bethel, Maine, by Dr. John Gehring, and at Heath, Mass., by Dr. Grace Wolcott, of Boston.

A majority of the physicians who have given attention to this subject, regard the material article, produced as a result of labor, as being in itself relatively unimportant. This is not the belief of Dr. H. J. Hall, of Marblehead, Mass., who disapproves of the kind of work which represents conscientious activity and nothing more, and who insists on work which has inherent value. In his shop of arts and crafts, Dr. Hall encourages his patients to produce pottery, rugs, and various articles in metal and wood which shall evince a genuine artistic merit. The proceeds of the sale of these articles is credited to the patient. Dr. Hall takes brokendown school teachers and makes of them successful artisans.

Clay modeling and basket weaving are now used therapeutically in the out-patient service of the Massachusetts General Hospital. Dr. Charles E. Atwood,[4] of New York, and Dr. Robert N. Willson,[5] of Philadelphia, have recently described various methods of utilizing, in practice, certain forms of diversion and of exercise.

It is a fair criticism of the beneficent modern treatment of tuberculosis—rest, forced feeding and fresh air—that some of its graduates are all too well content with their life of fed and fatted monotony. In a sanatorium for consumptives at Frimley, thirty miles west from London, the rest cure is supplemented by the work cure. Exercise is carefully graded from a short walk to a long excursion behind a lawnmower. Promotion is regulated by subsidence of fever, of certain subjective sensations, and of change in opsonic index. When conditions favor, the patient turns loose into his system a fresh dose of bacterial vaccines by more work. A diploma from Frimley is a practical asset.

Colony sanatoria for neurasthenics have not yet come into being in this country. In Germany, at Schönow, Rasemühle and Zürich,[6] beginnings have been made; and here carpentry, gardening, bookbinding and similar occupations hold high places in the prescribed régime.

The psychotherapy of Dubois and of Dejerine usually begins with a period of rest. Rest periods and diversity of employment are essential features in the programs which we construct. The experimenting physiologist tells us that a frog's nerve will respond to one irritant until exhaustion comes, and then, for a time, will respond to a different stimulus. Work, change and rest, which naturally succeed each other, sometimes successfully replace each other.

When we come into subconscious possession of the idea that occupation is frequently the finishing touch in therapeutic procedure, we utilize, perhaps unconsciously, an effective aggregate of apparently trivial means. In treating most of our patients, the end toward which we therapeutically struggle is heightened power of resistance to disease. For the development of antibodies is there any single agent more effective than work?

ABSTRACT OF DISCUSSION.

DR. F. X. DERCUM, Philadelphia: We neglect the matter of occupation too much. We should bear in mind the necessity of applying just such simple physiologic methods as have been advocated by Dr. Thayer. We are confronted by the three great neuroses, neurasthenia, hysteria and hypochondria. We can not put every neurasthenic at work because his nervous battery, so to speak, has been too much exhausted; but we should not neglect after a period of rest to start him at work. If the patient is not put back in the channel in which he is accustomed to expend his energy, or started in some new occupation, sooner or later recurrence may ensue. In case of hysteria, if there be no marked involvement of general health, the rest cure is often unnecessary. Only the direction of the energies into the proper channels is required. Of course, if the general health is impaired, rest methods, partial or complete, are imperative; the adoption of such methods should always depend on the judgment of the physician. In hypochondria, work—often strenuous and engrossing work—is the only thing that does good. The hypochondriac is simply obsessed by the idea of illness. We can not dismiss such a patient with the statement that he is not ill, because in one sense any departure from the normal state is illness; besides hypochondria is a well-recognized psychoneurosis. The highest degree of health is consonant, other things equal, with the highest degree of functional activity; functional activity of a high order is not only conducive to health, but also to longevity. All of the world's great men have been workers and almost all have attained great age.

One of the difficulties, of course, is to find an appropriate occupation for a given case. Sometimes I have a patient taught stenography and typewriting or I have her take a course in library work; I endeavor to find something that I hope will interest her. I know nothing more difficult than to select the proper kind of work. If the patient happens to be in the fortunate position of being obliged to earn a living, the problem is easier. Of course, the work cure is an instrument that is also capable of doing harm. We differ largely in regard to the amount of labor we are capable of performing without ill effect. It is necessary to use individual judgment in apportioning work and rest properly. In the great majority of cases work of some sort is of inestimable value, for it necessitates, among other things an objective, instead of an introspective attitude of mind.

DR. ALEXANDER S. VON MANSFELDE, Ashland, Neb.: The best proof of the pudding is the eating. In 1874, the founder of the College of Physicians and Surgeons of Chicago came to me, a young man in the profession, and asked me to translate for him a monograph on histology. I was so proud of the distinction that I overdid the work mentally and physically I collapsed. My physician caused me to leave my work at 4 in the afternoon and engage in what was then a new game, croquet. At first they could not get me out very easily; a little later, when 4 o'clock came I could not do anything in the work of translating. I am still here, and it must have done me good. Are not many physicians in the same condition as some patients outside of the profession? Is it not true that both need a vocation and an avocation in life—that avocation is the thing that overcomes many of our ills? My avocation has been the cultivation of flowers. I try to raise flowers that nobody else has ever raised. I use the hoe and spade, and the result is, I recuperate in my avocation after the intense work of the winter in my vocation. Winters in Nebraska are trying, and for twenty to thirty years I have traveled twenty to forty miles and more a day. This and the strain of trying to make the dollars, which were few enough, go as far as possible for thirty years, make it easy to go down hill. The avocation during the summer invariably restored me after the hard winter. So I am a living witness of the truthfulness of Dr. Thayer's statements.

DR. ADDISON S. THAYER, Portland, Maine: The chief object of the paper was to call attention to work cure in everyday practice. Each of us can use it in constructing a daily régime for our patients. I first put together as a part of the paper a brief account of the application of the work cure as I had seen it in people whom I know, most of whom I had treated; but it is easy to see that such accounts do not lend themselves as case reports to a paper for publication. Dr. Dercum has said that hypochondria work cure is the only treatment. That is another way of stating that occupation has a wide range of therapeutic usefulness; for we know that many of our patients have in their symptoms some element of hypochondria.

4. The Favorable Influence of Occupation. New York Med. Jour., Dec. 14, 1907.
5. The Pathogenesis and Treatment of Neurasthenia. Am. Jour. Med. Sci., February, 1908.
6. A Colony Sanatorium for the Nervous and Neurasthenic. George W. Jacoby, M.D., New York Med. Jour., April 18, 1908.

THE SERUM TREATMENT OF CARCINOMA.*

S. STRAUSS, M.D.
Lecturer in Gynecology, New York Polyclinic Medical School and Hospital, and Surgeon to Philanthropin Hospital.
NEW YORK.

Our therapeutic experience is replete with innumerable methods and remedies for the cure of cancer. The disease has been attacked from all sides; by the knife, by cautery and caustics, by catalysis, by *x*-ray and radium, etc., but all forms of treatment, in a great number of cases, have proved futile; even operation in the first stages of the disease, which has been lauded so highly, has often failed, and recurrence is still the rule in spite of the dictum that early operation will eradicate this terrible scourge.

After mature consideration, the examination of many pathologic specimens of all forms of malignant growths, the observance of same *in vivo*, and the careful perusal of all literature at my command I concluded that there must be some cause for the development of cancer other than local irritation. It seems that more attention should be devoted to the morphology of the blood and lymph circulation. There may be circulating in these media certain ferments or other elements necessary to the nutrition and multiplication of the embryonic epithelial cells which characterize every carcinomatous growth; therefore, it would follow that long before the cancer develops locally there is a constitutional dyscrasia which necessarily exists before any irritative or exciting cause can produce a malignant tumor.

We are further strengthened in this belief by the fact that metastatic deposits in other organs always are identical with the original growth. For instance: A cylindrical cell carcinoma will always produce the same glandular variety in metastases in the same individual, while transplantations invariably become absorbed, showing that there are other factors and ferments besides sufficient blood supply conducive to the development of these wandering deposits.

Whether the irritation we ascribe to the beginning formation of cancer, such as is produced by a blow; or of long continued inflammation or disturbances in the blood pressure concomitant with grief; or chemical, produced by interferences with the metabolic changes of the body, such as excessive meat eating and alcoholism; or whether hereditary influences determine the formation of these abnormal cell growths is a question which should be thoroughly investigated, not only theoretically, but practically. While epithelial proliferation has long been regarded as a necessary factor in the formation of cancer, still we are unable after numerous observations to explain why the epithelial cells penetrate deeply and spread out into the surrounding tissues, forcing their way into adjacent structures in spite of all the barriers nature erects. Does the epithelial cell in loco possess an inherent property of itself, or does there circulate in the lymph and blood stream a ferment whose action is to stimulate atypical epithelial cell proliferation?

The latter theory seems correct, as thus far the experiments of inoculating cancer masses have been negative, although the literature is replete with successful transplantation cases; however, they have not been borne out by the test of time. Another question which arises is this: Are these cells really epithelial cells? May there not be a cell resembling an epithelial cell which as yet we have not been able to differentiate from a normal epithelial cell? It seems impossible to believe that the function of the normal epithelial cell, which is mainly to secrete, should be so modified as to produce a virulent toxin which has such destructive action on the other cellular elements of the body. The theory regarding the matrix or connective tissue having a restraining or inhibitory influence on the epithelial proliferation is hardly tenable because investigation has shown that the matrix only reacts after the active epithelial process has begun.

Regarding the parasitic nature of cancer nothing has been proved. Schaefer, of Germany, claims to have discovered the germ. Plimmer maintains that certain inclusions in carcinoma cells are protozoa. This assertion has not been substantiated, as the protozoa bodies have been found to be the products of metamorphoses or deposits of pigment from the staining fluids. The blastomycetic formation of cancer, as advanced by the Italian school, has also found few adherents. Meyer, of Munich, suggests that the consumption of ova bearing or embryonic foods may be responsible for the origin of malignant growths. Recently Dr. Beard, of Edinburgh, published a theory of cancer formation being due to an embryonal change of a cell which he calls trophoblast. He claims that the trypsin and amylopsin ferment will cure same, but we have no cases to prove this theory; therefore, we must hold our opinion in abeyance for the present.

My theory is this: That the cancer elements are found in utero; that is, there is an abnormal development of the embryonal cells, which group is the starting point of a carcinomatous growth. Intermingled with the healthy epithelial cells are these cancer units, and whenever the conditions for hemming them in or retarding their growth is overcome by exciting causes, such as improper living and eating, mental worry or grief, senility, etc., they multiply very rapidly, destroying and penetrating into the surrounding tissue, giving off a toxin which in time infects the entire system. Therefore, our endeavor should be to demonstrate a cancer specific reaction in the human body by means of a serum precipitant establishing its identity, irrespective of a microscopic examination.

In pursuance of this theory, in the spring of 1904 I decided that possibly the inoculation of a serum taken from the lower animals suffering from a similar malignant condition, which treatment had not then been tried, might be successfully used in the human subject with the idea of arresting the disease and eventually effecting a permanent cure. I believed that the serum contained enough antibodies to neutralize the toxin circulating in the system. I found great difficulty in the course of my studies because I stood practically alone in a new field, and, therefore, received no benefit from the work of others. During my stay abroad I consulted with some of the best investigators who, with the exception of Dr. Greenebaum, of the University of Liverpool (who was kind enough to give me the data of his work along similar lines), could throw no light on the subject. I experienced much difficulty, also, in procuring this serum on account of the rarity of the disease in the lower animals. Through advertising and visiting veterinary surgeons I succeeded in observing a few cases in the equine and canine. My thanks are due

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

Dr. Ellis, of the *American Veterinary Review*, and others for their kindness in assisting me to obtain the desired material.

Bier has injected defibrinated blood in cancer, using 4 to 20 c.c. weekly. Some improvement was noted. The injections were followed by marked reactions; they were given into the vein of the arm.

Doyen isolated a micro-organism, *Micrococcus neoformans*, and prepared an antagonistic serum by the injection of its toxins into animals. This he used to treat cancer cases, and of 126 cases observed in 58 there was no improvement; 21 patients were cured. The micro-organism has not been demonstrated and the serum is not used.

Schmidt, of Cologne, prepared a serum by inoculating horses and sheep with cultures of a parasite derived from malignant growths. He claims good results. Trial of this method was made in the Middlesex Hospital, London, and nine patients were treated with no benefit.

Dubois, in 1897, injected macerated tumors into animals and used the serum as a remedy. He reported that fibrosis was induced in new growths. Von Leyden did the same work on rabbits; used the serum in human subjects, after having tried it on dogs, with some good results. He believes that the action of the serum is to attack the weak tumor cells without injury to the normal epithelial cells.

Adamkiewiz claims good results from cancroin, which consists of neurin, citric and carbolic acids, but this work was not carried out scientifically, and the diagnoses were not substantiated by the microscope. I have also contributed some work along these lines by inoculating apes with a solution of fresh carcinoma and sarcoma juice, but never succeeded in getting any results.

The serum which I am using at present is obtained directly from the lower animals suffering from malignant growths, principally the horse; the diagnosis being substantiated microscopically. The internal jugular vein was laid bare and a canula plunged therein under cocain anesthesia. About 1,500 c.c. of blood were withdrawn, which was allowed to stand in a vessel until the corpuscular elements settled to the bottom. The serum was then siphoned off under aseptic precautions, and ½ per cent. of carbolic acid added as a preservative to one portion, while another portion was heated for three successive days, for one hour, at a temperature of 55 C. The serum was then transferred to small bottles holding 30 c.c. Of course all this was done under rigid asepsis. The serum was then spread on colonies in order to test for bacilli, also injected into guinea-pigs, the result in both cases being negative. It was kept in an ice-box and after the lapse of one year it was again tested in the same manner and found to be sterile.

Shortly after injecting the serum the face of the patient becomes flushed; there is an increase of the blood pressure, as the serum seems to have a marked effect on the spinal centers, producing pain in the back, which radiates down the legs. In some cases a chill occurs within the first few hours. After four to six hours there is an elevation of the temperature, but not exceeding 3 degrees in any case observed. At times there is great restlessness for the first twenty-four hours.

Owing to its action on the vasomotor system, the serum has a remarkable effect in relieving the pain of deep seated and visceral cancers, after the primary intense pain has passed.

REPORT OF CASES.

CASE 1.—Mrs. L., 63 years of age. Adeno-carcinoma of the neck. The patient has a large mass on the right side of the neck about the size of an egg, also one on the left side, somewhat smaller. Both these masses had been under observation for about three months; the masses having increased in size and becoming hard. There was no doubt of the malignant character, as the primary affection was in the glandular tissue. The patient was seen with Dr. Richardson, who permitted the use of the serum.

The injection contained 0.5 c.c. The patient, who had suffered great pain from the rapid growth and pressure of the tumors on the adjacent structures, was relieved somewhat during the first twenty-four hours. This injection was repeated every third day, in augmented doses, until 2 c.c. were given at one time. The tumors gradually shrunk during the course of treatment, and the temperature varied from 99.5 to 101 as a result of the serum reaction. This treatment was well borne by the patient, and she continued to be free from pain and in good health, but owing to her nervousness and not understanding the nature and severity of her disease, she refused, after some months, further injections, claiming to be cured.

CASE 2.—Mrs. M. had been suffering for six months with carcinoma of the sigmoid involving the pelvic fascia. There was intense pain, emaciation and vomiting. As her suffering was very great and exposure to the *x*-ray, injections of morphin and other forms of treatment had given no relief, her physician, Dr. Feldman, suggested that I should use the serum.

On examination I found a carcinomatous growth at the juncture of the sigmoid with the colon, enlarged ilio-lumbar glands on the right side, and infiltration of the surrounding connective tissue on the left side. As a radical operation was out of the question, we concluded to try the serum. She showed a decided reaction, evinced by increasing of the pulse rate, elevation of the temperature and some restlessness for the first twenty-four hours after the injection. This was followed by a marked amelioration of all the symptoms. The treatment was continued for about four weeks, with pronounced benefit to the patient.

After having produced these results we decided to discontinue the injections until the return of pain, which occurred in several weeks, when we again resorted to the serum, its use producing beneficial results until the death of the patient.

CASE 3.—Mrs. W. had a breast carcinoma. She presented herself in January, 1905, with a carcinomatous ulceration of the manubrium sterni; both axillary regions contained glands which were hard, nodulated and extremely painful to the touch. The supraclavicular glands on the left side and the superficial cervical region were infiltrated. The diagnosis was confirmed by microscopic examination.

The patient had been treated by *x*-ray by one of the best roentgenologists for several months, but the pain and tumefaction increased. We concluded to try the serum treatment; accordingly she was injected with 2½ c.c. of serum at 6 p. m., Jan. 23 and 26. After the second dose the face became very flushed. The third injection, 5 c.c., was given on Jan. 30, after which she felt chilly and did not sleep well. On Feb. 1 she felt much better and slept all night. Feb. 3, 6 c.c. were injected. Temperature arose to 99.8 F. and she complained of itching of the skin around the growths. Feb. 6, 6 p. m., 10 c.c.; Feb. 7, 8 a. m., temperature rose to 100.5 F.; Feb. 9, 15 c.c.; Feb. 14 pulse, which had been 96 to 100, dropped to 80, and temperature to normal. The patient was entirely free from pain and no itching.

At the time these injections were given there was a marked diminution of the swelling, tenderness and infiltration in both axillæ. A slough separated from the manubrial ulceration, and this primary focus showed healthy, reddish, flat, non-infiltrating granulating tissue. This status persisted for some time, to such an extent that the patient and friends refused treatment until the return of severe pain. On request I again used the serum, but owing to a lack of cooperation on the part of the patient I did not continue the treatment, much to my regret. The noteworthy points of this case were the effect on the vaso-motor system, evinced by the flushing;

shrinkage of the axillary tumefactions; relief from pain; increased appetite and sleep. While we could not expect to cure such an extensive and inoperable carcinomatous involvement, still I am certain that the serum had a very beneficial effect, and it being one of my first cases stimulated me to further efforts in this line of treatment.

CASE 4.—Sam K.; age, 59. Came under my observation Dec. 7, 1907. He had carcinoma of the tongue; right side, glandular involvement; great difficulty in swallowing, chewing and articulation. Used alcohol and tobacco excessively. He noticed the growth three or four months before seeing me.

First injection of m. xxx., Dec. 7, no reaction. Second injection, 1 c.c., reaction, pulse 108, temperature 101 F. on Dec. 9. On Dec. 12 he reports he is feeling better; glands not as prominent. Dec. 14, 2 c.c.. Dec. 18, says he feels weak, but carcinomatous areas have a clean appearance and he can swallow much better. He is receiving injections biweekly, but his disease, which appeared to be arrested for some time, seems to be progressing slowly.

CASE 5.—Mrs. B. came under observation January 30 for melanosarcoma, which was examined by Dr. Jeffries. Injected with serum of the same disease; 1 c.c. of the serum gave a marked reaction. The patient had a severe chill, temperature 103, pulse 120. The next dose was given six days later, but the pulse did not rise over 90; temperature 100 F. She has an injection occasionally, but feels well, therefore does not appreciate the necessity for further treatment. The growth, which was on the cheek, was excised and I have advised her to continue the injections.

CASE 6.—I. A. Recurrent pyloric carcinoma sent to me by Dr. Kaplan of Brooklyn. He had been operated on by Dr. Abbe eight months before. In April, 1905, he was taking 10 gr. of morphin daily and weighed only 98 pounds. He was put on large doses, 3 c.c. to 8 c.c. at once. He continued treatment for one year and then appeared to be cured. Refuses further treatment; is working as a tailor and now weighs 152 pounds.

While the cases treated with serum have not been numerous, still the number has been sufficient to judge the benefits of this method of treatment in certain inoperable cases. Most of these cases are treated in the following manner: At times a palliative operation is done to check hemorrhage or to eliminate the odor, but most frequently the patient is given morphin, which procedure is held aloof from by the attending physician as long as possible, as he realizes that he must constantly increase the dosage, always with the fear that he has started this means of relief too soon, and that a time may come when it will not produce the desired result; therefore such a remedy as the serum should have a well defined position in the therapeutics of carcinoma because it supplants the use of morphin in relieving pain without interfering with the other functions of the body until the disease has run its course.

My work is in its infancy, and, although surrounded by darkness, I feel that some day we shall find the exact cause of carcinoma and then we shall be able to formulate a correct therapy based on the true causal factors. The hearty cooperation of my colleagues, which is so necessary to achieve the desired results, is requested.

CONCLUSIONS.

1. Visceral carcinoma is incurable and fatal in nearly all cases.

2. Superficial or surface carcinoma is curable and amenable to treatment if attended to early.

3. Carcinoma is hereditary, the tendency to its formation being transmitted to successive generations, and it becomes evident whenever the natural restraining influences are removed.

4. Carcinoma is on the increase, the death rate being over seven thousand in New York state in 1907 (Gaylord).

5. The serum treatment should be used after every operative case to immunize the system and prevent recurrence. It raises the opsonic index and causes a leucocytosis.

6. The serum treatment should be used in inoperable cases, because it relieves the pain and ameliorates the symptoms without interfering with the natural functions of the body.

111 West One Hundred and Nineteenth Street.

ABSTRACT OF DISCUSSION.

DR. T. J. WATKINS, Chicago: Those of us who have been operating on carcinoma must admit that we are usually disappointed in the results. When I read papers reporting cures of from 50 to 75 per cent. of cases of carcinoma I am astounded. I am always surprised when a patient with carcinoma on whom I have operated does not have a recurrence, and I often question the diagnosis when there is no recurrence. Dr. Strauss' results are such as to give us encouragement in the treatment of these cases by serum. The disease so soon becomes a general one (if it is local in the beginning) that operative treatment is generally not sufficient. We find, for instance, in some of the very early cases of carcinoma of the cervix that the pelvic glands are involved, and the removal of the pelvic glands does not seem to give the results hoped for when the operation was first brought forward by Ries, Rumpf, Clark and others. Extensive operations in the pelvis for carcinoma have apparently not given the good result that extensive operations have given in case of carcinoma of the breast.

Dr. Strauss' results justify continued work along that line of investigation, and they should also induce many more of us to take it up.

DR. I. F. HARTER, Stronghurst, Ill.: I understand that Dr. Strauss assumes that some cases were produced by grief. Was the carcinoma confined to any one organ or any particular location or did such a cause influence the location of the carcinoma?

DR. S. STRAUSS, New York: I hope no one received from my paper the impression that I cured carcinoma with this serum. I have just been making a study of the disease. One patient has been cured under this treatment, but it might be just a coincidence, and I only note that this serum has a beneficial effect in a great many cases. I did find the history of grief in many cases of intestinal and stomach carcinoma. It is not, however, a scientific observation.

SOME THERAPEUTIC OBSERVATIONS.*

ONSLOW REAGAN, M.D.
ALEXANDER CITY, ALA.

We are to-day balanced between polypharmacy and multitherapy on the one hand and therapeutic nihilism on the other hand. The intricate problem before us is to extricate ourselves from this dilemma.

Analysis of the three fundamental scientific principles on which the practice of therapeutics is based, namely, the securing of elimination, the maintenance of the balance of equilibrium, and the sustaining of vitality, shows that no specific therapy *per se* can cover all three of those principles.

Therapeutic agents are only means by which we may be able to obtain definite physiologic results. The multipharmacy of to-day is the offspring of the spirit of commercialism incarnated in the person of the "new quack." The "old quack," who formerly occupied a

* Read before the Chattahoochee Valley Medical and Surgical Association, at Auburn, Ala.

position in the medical profession, was an objectionable personage, yet he filled in vacant spaces and was considered a necessary evil. But the profession, on becoming better organized, saw proper to eliminate the "old quack" from practice.

In process of time, however, the "old quack" came back, bringing with him seven other "new quacks," more quackish than he. Finding the profession garnished and clean, they took up their abode therein.

These "new quacks" employ in their service men who are among the most expert salesmen in the world (we have all heard the medicine-man talk), who make channels to the ends of the earth for rivers of sugar and water, deliciously flavored, beautifully colored, pleasing both to the eye and taste, a panacea for all real or imaginary ills, and who direct into their coffers a return-flow consisting of streams of shekels. Where do we find the wares of the "new quack"? Anywhere; in the lone cottage by the wayside, in the mansion, in every town and hamlet, from the rivers to the ends of the earth. Where do we find the "new quack"? We find him also anywhere; in Millionaire's Row, and even in the professor's chair.

The expert salesman of the "new quack" comes along and with his eel-skin tongue beguiles the druggist, and loads his shelves from floor to ceiling with high-grade ethical pharmaceutical compounds. The doctor, too, ever in search of the philosopher's stone, sees the glowing advertisements in the pages of every medical periodical, and is presented with scores of beautiful specimens of the aforesaid high-grade ethical pharmaceutical compound. He sends in his prescriptions calling for these compounds and continues to do so until he finds that he has merely been acting as an unpaid agent, dispensing and advertising the wares of the "new quack" in every nook and corner. Now, what shall we do with the "new quack"?

From personal experience I suggest that a physician can place his favorite prescriptions, under a simple suggestive title, in the hands of his druggist, who will keep in stock C.P. drugs, freshly compounded. This measure will minimize the time of dispensing and prescribing, will tend to give uniformly good results; and these good results, in turn, will increase the physician's reputation for professional skill. This plan, moreover, will give the local druggist the advantage of local pharmaceutical trade, and will relieve him of the humiliation of being a mere dealer across the counter.

By following this plan, physicians can eliminate nine-tenths of the superfluous mixtures from the market, elevate the standard and dignity of the medical profession by confining the practice of medicine within the boundaries of the medical profession, and thereby save to the profession and to the laity millions of dollars every year.

The Food and Drugs Act caused a stampede in the ranks of the "new quack." The efforts of the Council on Pharmacy and Chemistry of the American Medical Association are placing some of the objectionable proprietary compounds under the ban. The cooperation of the physician with the Council on Pharmacy and Chemistry will place pharmacy on a sound and reliable basis; and this it is the duty of the profession to do. Individual happiness and prosperity, the prosperity and happiness of families, the progress and prosperity of the nation—all are to a great degree dependent on the progress and success of medical science.

MILK AND ITS RELATION TO INFECTIOUS DISEASES.

JOHN W. TRASK, M.D.
Passed Assistant Surgeon, Public Health and Marine-Hospital Service.
WASHINGTON, D. C.

That milk may play a part in the spread of certain diseases has, for many years, been appreciated. From our present knowledge the more important of these are typhoid fever, scarlet fever, diphtheria, and possibly tuberculosis.

TYPHOID FEVER.

Undoubtedly the relative importance of the various agencies by which typhoid fever is distributed varies with the locality and conditions. The various factors, water, milk, flies and contact, have different values in the city and in the town. They will naturally also vary in importance with the season, the latitude, and the local customs. Improved water supplies have eliminated water as a factor in many places, while regulation of the production, handling and sale of milk is doing the same for it in some communities. It would seem that water has been so apparent as a frequent carrier of the infection that other agents have not been looked for, or at least not commonly found, until improved water supplies had demonstrated that there were other factors at work. The experience in Massachusetts has been given recently by Harrington,[1] as follows:

In the public mind outbreaks and epidemics of this disease (typhoid) are commonly associated with polluted drinking water, but when water supplies are properly guarded, as in Massachusetts, for example, they are more commonly found to be caused by contaminated food, and especially by that one which is most subject to pollution and which offers the specific organism the most favorable conditions for preserving its virulence and increasing its numbers—namely, milk. During the past two years, of eighteen local outbreaks of typhoid fever in different parts of Massachusetts, investigated under my direction, fourteen were traced to milk.

Jensen[2] also makes the statement: "The principal means by which typhoid fever is distributed in places where there is a safe and hygienic water supply, is through milk."

The *Bacillus typhosus* has been isolated from market milk. Konradi reports finding it in two samples in 1905. In 1890 Vaughan isolated from market milk a bacillus which was in all probability a typhoid organism. Shoemaker[3] reports an outbreak of milk typhoid in Philadelphia in October, 1906. He states: "A culture made from the milk proved the presence of the typhoid bacillus in it." A visit to the dairy revealed that the proprietor and one of his servants were ill with typhoid and that "the son was convalescing from typhoid fever and was filling the milk bottles from a tank by siphonage, starting the flow by sucking with the mouth at one end of the tube. A culture made from this end of the tube revealed many typhoid bacilli."

The ability of the typhoid bacillus to grow and increase in numbers in milk and to retain its viability in market milk, cream, butter and buttermilk for periods ranging from seven to twenty-seven days has been demonstrated by Eyre, Cautley, Bfoers, Bruck, Pfuhl and Bolley and Field.

I have elsewhere presented the abstracts of 317 typhoid epidemics reported as spread through the agency

1. New York Med. Jour., 1907, p. 697.
2. Essentials of Milk Hygiene, English Ed., 1907, p. 106.
3. THE JOURNAL A. M. A., May 25, 1907, p. 1748.

of milk[4] (also abstracts of 125 milk scarlet fever epidemics, 51 of diphtheria and 7 of sore throat or pseudodiphtheria). These were collected from various compilations and original reports, and an effort was made to eliminate all outbreaks in which the evidence seemed insufficient. What a small proportion of milk typhoid epidemics this must be of the whole can only be estimated by considering what a small percentage of epidemics are reported in the literature and how little consideration has usually been given to milk in the study of typhoid outbreaks.

Within the last two months, Boston, Mass., and Providence, R. I., have both had outbreaks of typhoid fever which appear to have been due to milk.

One of the important factors in the spread of typhoid fever by milk is undoubtedly the bacillus carrier. Individuals in the early stages of typhoid may be physically well enough to continue at work milking or handling milk; others with very mild attacks may not cease work at all. Both may be discharging typhoid bacilli in the excretions. Possibly more common, and therefore more important, are the chronic carriers, who, being well, have no reason to cease work and therefore continue to be distributers of bacilli over long periods of time. Several epidemics, due to milk infected by these chronic typhoid bacillus carriers, have been reported. Others will undoubtedly be found with increasing frequency as epidemics are studied with this possibility in mind.

Branthwaite reports an outbreak at Brentry Reformatory, an institution for the detention and treatment of habitual inebriates. The reformatory consisted of 16 buildings, scattered over about 98 acres of ground. The institution was practically isolated from other communities and housed usually about 265 persons. It ran its own dairy. From 1899 to 1906 the institution remained free from infectious diseases. The first case of typhoid occurred in September, 1906, and by November, 1907, twenty-eight cases had developed. The patients fell ill at irregular intervals and always in groups of from three to five. The first patient was a woman who had been in the institution several months, and therefore removed from the possibility of outside infection. Careful search was made as to the possible introduction of the disease, but in spite of all precautions others continued to be attacked. A detailed investigation pointed to the milk as the carrier of infection. All milk had been regularly sterilized, and therefore, if it were the cause, it was necessarily due to defective methods or to subsequent contamination. A new sterilizing plant was installed, and all handling of milk after heating was limited to two persons, a man and a woman. But still cases developed, and all evidence continued to point to the milk. It was, therefore, concluded that infectious material reached the milk after sterilization, and it was decided to find whether one of the two persons handling it was a bacillus carrier. The woman milk handler was removed from the dairy and her feces examined. Pure cultures of the typhoid bacillus were isolated from her stools. She was permanently removed from the dairy, and, after a lapse of the usual incubation period of two weeks, no new cases had developed up to the time of the report, three months later.

Dr. A. K. Chalmers, medical officer of health of Glasgow, Scotland, reported an outbreak in Glasgow in December, 1907, and January, 1908. This outbreak is of interest because of the parts played by a bacillus carrier and an acute case of typhoid fever in the production of the epidemic. There were 126 cases of typhoid, in all of which the patients obtained milk from one dairy. Eight of the patients sickened between December 5 and 14. One of these eight cases developed at Parkhouse dairy farm, which supplied milk to the distributing dairy from which all the other patients obtained their milk. Then for four days there were no cases. Following this, between December 19 and January 13, ninety-three cases developed. The result of much careful work in studying the relationship of the milk distribution to the incidence of the disease showed that the Parkhouse farm was the undoubted source of infection, and while the acute case which developed there could, from a standpoint of time and opportunity, have been the direct cause of the ninety-three and more cases which formed a typical milk epidemic, and undoubtedly was the cause, yet there remained to be found the source of infection of the first eight cases, of which this patient was one. The water supply of the farm could not be found at fault, and so an investigation was made of the dairy hands. There was found an elderly woman milker who gave a history of having been previously associated with outbreaks of typhoid fever. She had had the disease sixteen years before. Her stools were examined and the *Bacillus typhosus* isolated. Her blood gave a positive Widal reaction with "the laboratory strain of the *Bacillus typhosus*." The conclusions drawn were that this woman was the source of infection of the first eight cases occurring between December 5 and 14, one of which developed on this same farm in a woman who was ill from December 7 to 24 when her case was diagnosed as typhoid fever, and that this latter case was the source of infection causing the typical milk outbreak between December 19 and January 13.

Kayser, in 1905, reported two small milk outbreaks of typhoid fever traced to chronic bacillus carriers as the source of infection. Dr. Henry Albert, in 1907, reported a similar outbreak in Cedar Falls which seemed to be due to a like cause.

When it is considered that available evidence seems to show that between 2 and 4 per cent. of typhoid convalescents become chronic bacillus carriers, the probability that some of them are employed at dairies in milking cows and handling milk is very great.

SCARLET FEVER.

Milk has been the undoubted carrier of infection in many epidemics of scarlet fever. Reference has been made to 125 outbreaks of this kind, interesting examples of which in this country have been reported at Boston in 1907,[5] Evanston in 1907,[6] Springfield in 1904,[7] Beverly, Salem and Bakers Island in 1901,[8] Plainfield in 1900,[9] Buffalo in 1899,[10] Washington in 1898,[11] Norwalk in 1897[12] and Buffalo in 1893.[13]

4. Bulletin No. 41, Hyg. Lab. U. S. Public Health and Marine-Hospital Service, Washington, pp. 21-147.

5. Reed, C.: Report Boston Health Department, 1906, p. 126; also Monthly Bulletin, State Board of Health, Massachusetts, March, 1907.
6. Hemenway, H. B.: THE JOURNAL A. M. A., April 4, 1908.
7. Massachusetts State Board of Health Report, 1904, p. 422.
8. Morse, F. L.: Massachusetts State Board of Health Report, 1901, p. 561.
9. New Jersey State Board of Health Report, 1900, p. 232.
10. Wende, E.: THE JOURNAL A. M. A., Jan. 20, 1900, pp. 150-151.
11. Report of Health Officer, District of Columbia, 1899, p. 43.
12. Smith, H. E.: Connecticut State Board of Health Report, 1897, p. 259.
13. Wende, E.: THE JOURNAL A. M. A., Jan. 20, 1900, pp. 150-151.

In Boston, in January, 1907, there was a pronounced milk scarlet fever epidemic.[5] The outbreak was explosive; 227 cases occurred in four days. Of these, 195 were in families taking milk from dairyman "A," while the other 32 took milk from 17 different dealers. The water supply was above suspicion. The dairyman also sold milk in Cambridge, Somerville and Everett, and in the four places there were reported during the first 20 days of January 717 cases of scarlet fever, of which 367 cases were in Boston, and of these 80 per cent. were supplied with milk from dairy "A." Of the 152 cases in Cambridge, 85 per cent. were in families supplied by this dairy. Of the 155 cases in Somerville, 86 per cent. used this milk, and of the 43 cases in Everett 83 per cent. used it. Of the 717 cases, 485, or 67 per cent., occurred in the 6 days, January 7-12, inclusive.

An interesting series of cases of scarlet fever is reported by Holden. During a period of three months in 1906 twenty cases of scarlet fever occurred in Melrose, Mass. Of the twenty, nineteen were customers of one milkman. He had not been sterilizing his empty bottles, but when it was found that practically all the cases of scarlet fever were on his route he began to do so, and cases of the disease then ceased to occur. The evidence seemed to indicate that in all probability bottles returned from infected houses were refilled with milk without adequate sterilization, and in this way the disease was spread. Very likely only an occasional bottle contained virulent infectious material, and, therefore, the number of cases thus infected remained small. This emphasizes the difference between an outbreak due to infected bottles and one in which infectious material gains entrance to the milk before bottling. In the former there is usually a series of cases, not many at a time, but extending over a considerable period. Not all houses having scarlet fever cases would be likely to infect the empty bottles. Very probably in families where the domestic arrangements were such that bottles were contaminated this would not happen with every bottle. Then, too, some of the infected bottles would go to households, the individuals of which were immune to the disease; other bottles would go to families using little or no milk in a raw state. The chances are also that households would be exposed to infection for but one day at a time and thus many would escape. In this way, cases would continue to be reported at intervals, but never many simultaneously. But all this is changed when the infection enters the milk before bottling, at the producing farm for example. Under these conditions a relatively large amount of milk is infected and if it goes to a distributing dairy where many gallons are mixed in a tank previous to bottling, then hundreds of families may be exposed to infection on the same day, and as a result an explosive outbreak occurs. If the source of infection continues, the families of an entire milk route may be exposed daily to the disease, whereas in bottle infection the probabilities are that each day only the users of a certain limited number of bottles, possibly but one bottle, are thus exposed. Typhoid and diphtheria bacilli may increase greatly in numbers in milk, and the same may be true of the cause of scarlet fever.

Hemenway[6] reports an explosive outbreak of scarlet fever in January, 1907, at Evanston, Ill. One hundred and fifty-seven cases occurred between January 14 and 21, and of these 153 were in families supplied with milk from dairy "A," which sold only about one-seventh or one-eighth of the milk used in Evanston. Investigation failed to show any public gathering, church or school, which could have been the source of the outbreak. In a large family boarding house, accommodating about seventy persons, the only one using milk from this dairy was a baby, and this baby was the only one to contract scarlet fever in that neighborhood. The dairy proceeded to change its source of milk and the outbreak in Evanston rapidly subsided.

Many other outbreaks might be cited. Those specially interested in the subject will find that the literature contains accounts of many similar epidemics, each of which presents its individual problem.

In many epidemics of this type, cases of scarlet fever have been found at the farms producing the milk. In many persons with mild attacks, or still desquamating from more severe ones, have been found milking the cows or otherwise engaged. In a few, milk bottles were apparently infected in houses containing scarlet fever cases, and, being refilled without proper sterilization, conveyed the disease to others, as at Melrose.

DIPHTHERIA.

Milk not infrequently becomes contaminated with the Klebs-Löffler bacillus and gives rise to outbreaks of diphtheria among persons using it. Such an outbreak was reported in 1877 in England by Jacobs, and since then many others have been traced to a like source. In 1886 a similar epidemic was reported in Melrose, Mass., by Clark.

In 1898 Pitfield reported an outbreak in Philadelphia of fifteen cases among consumers of milk from one dairy. These cases were in houses widely scattered, the children attended different schools, and several adults were attacked. The Klebs-Löffler bacillus was isolated from the throat of a child on the dairy farm, as well as from the patients on the milk route. The cases were all reported in one week. The points characteristic of a milk outbreak in this instance were the explosive onset of the cases and their occurrence in scattered houses, the inmates of which had no social connections, the only thing in common being the milk supply.

Chase reported a small outbreak in Brookline, Mass., in 1899. Two children of a milkman had diphtheria and were sent to the hospital. In Brookline only seven or eight families used milk supplied by this man, and of these four developed diphtheria. Cases were also found in Boston on this man's route. On examination, diphtheria bacilli were found in the throats of some of the milkers on his farm. Of the twelve cases in Brookline, no other possible source of infection was found. All the diagnoses were made bacteriologically.

In Plainfield, N. J., in July, 1899, ten cases of diphtheria were reported within eight days among the customers of a rather small milk route. Other cases were also found on this same route in North Plainfield. On investigation it was found that a child was ill with the disease on the farm producing the milk.

In Montclair, N. J., March, 1901, fifteen cases of diphtheria were reported in five days among the customers of one dairy. Examination of the dairy employés showed Klebs-Löffler bacilli in the throats of three. Proper measures were taken to prevent infection of the milk and the outbreak ceased.

Powers reported that in June, 1903, in Los Angeles, within 10 days, 33 cases of diphtheria developed in 30 out of 110 families using milk from one dairy. Examination of the throats of the dairyman's family re-

sulted in finding diphtheria bacilli in 2. The same author reported a similar outbreak in October of the same year, in which 35 cases occurred within 10 days in 33 families using a common milk supply. Klebs-Löffler bacilli were similarly found in the throats of three of the milkers.

Brown reported that in Auburn, N. Y., of 60 cases of diphtheria developing in June, 1904, 45 individuals used milk from one dairy, while the other 15 took milk from 13 different milkmen. Investigation revealed 2 cases of the disease on the farm producing the suspected milk. The sale of this milk was stopped and the outbreak ceased.

Tuttle reported an explosive outbreak of nineteen cases in Helena, Mont., in 1904, which occurred in one week among the patrons of a dairy. A child on the dairy farm was found to be ill with the disease.

In Rochester, N. Y., August, 1905, Roby reported an outbreak of 10 cases occurring in a period of 11 days on one milk route. The cases were scattered and in 9 families. The schools were not open at the time. No source of contagion could be found until a visit to the milk farm revealed a case of clinical and bacteriologic diphtheria in the person of one of the milkers. Other cases occurred in children on the farm.

In Wellsville, N. Y., May, 1906, Witter reported that four children in a dairyman's family contracted diphtheria. While they were ill the milk was cared for at a distance from the house and the milkers remained away from the sick. After the children were reported well and the house disinfected by the mother, the milk was brought to the house for cooling and bottling. Ten days later diphtheria began to be reported on the milk route, and within two weeks there were forty-six cases in thirty-eight families using this milk, and no case had been reported in any family not a patron of this dairyman. Later secondary cases due to contact developed and the clear-cut picture of a frank milk epidemic became less pronounced.

In Hyde Park, Dorchester and Milton, Mass., April, 1907, an explosive outbreak of 72 cases occurred within one week. Of these, 32 were reported on one day. Of the 72 cases, 69 were in families using milk coming from a dairy farm where the farmer's grandchild had the disease. The milk utensils were washed in the house by the same person who nursed the sick child. The three cases in persons not using this milk were in one house and were clearly secondary to a known case. The distribution of the cases followed the milk route, and the outbreak ceased when the sale of milk was stopped.

Colter reported an outbreak at Clifton, Ohio, October, 1906:

Beginning Oct. 3, 1906, within a few days thirty-six cases of diphtheria developed in the suburb of Clifton within four squares of each other. The membrane appeared in all cases, first on the tonsils. There are several reasons for believing milk was the carrier of infection. First, each of the thirty-six patients drank the suspected milk. Second, when only one member of the family drank the suspected milk, as happened in several families, only that member contracted diphtheria. Third, in two families who took milk from this dairy, but who sterilized the milk before using it, no diphtheria appeared. Fourth, in the case of a small boy who returned from Europe on the afternoon of October 4, and who, on reaching home, at once ran to the cottage of the coachman and there drank a glass of the suspected milk, diphtheria appeared on the evening of October 6. The following day the coachman, his wife and daughter all had diphtheria, all having drunk the same milk. At this time two cases developed in a boarding house in the heart of the city, several miles distant from the other cases. These two, mother and child, had daily visited the boy's grandmother in Clifton and there drunk milk. This milk came from a small dairy and the boy who delivered it had had a sore throat.

Milk diphtheria outbreaks were also reported in September, 1907, in Warwick and Pawtucket, R. I., by Swarts.

Many other similar outbreaks might be enumerated, but it is believed that the foregoing will give some idea of their prevalence and wide distribution. When the length of time diphtheria bacilli may remain in the throat after an acute attack, and the number of anomalous cases that occur, are taken into consideration in connection with the fact that the organism grows well in milk, the wonder is that such outbreaks are not more frequent.

The Klebs-Löffler bacillus has been isolated from market milk by Bowhill,[14] Eyre,[15] Klein[16] and Dean and Todd.[17]

In 1898, in Senghenydd, an explosive outbreak of thirty-nine cases of diphtheria occurred. All evidence pointed to the milk as the carrier of the infection. Bowhill examined the milk and isolated the Klebs-Löffler bacillus. His findings were verified by Nuttall. Dean and Todd isolated the bacillus from milk which had caused an outbreak of five cases of diphtheria. Klein found it in one out of one hundred samples examined.

When in a city an unusual number of cases of scarlet fever, diphtheria or typhoid fever occurs among the customers of any one dairy, it may be considered a sufficient reason for causing a careful inquiry to be made and a search for some source of milk infection. The mere finding of cases on one milk route is not by any means conclusive that milk is the carrier of the infection, but it is sufficient to cast suspicion and at times undoubtedly also to warrant regulation, even if no source of contamination is found, for it is often exceedingly difficult to find the infective focus.

The health officers of many cities have for some time been charging each case of typhoid fever, scarlet fever and diphtheria to the dairyman supplying the milk to the invaded household. In this way it is apparent when an unusual number occurs on one route, and measures can be taken to ascertain whether the incidence of the disease has an etiologic relationship to the milk. Cases which otherwise would show no relationship to each other are revealed as associated and the milkman makes neighbors of families separated by considerable distance. In the complicated life of cities this gives the health officer a valuable aid in the control of certain of the common infectious diseases.

The following are some points of interest in the study of milk outbreaks:

1. The number of cases of the disease existing in the involved territory during the time covered by the epidemic.

2. The number of houses invaded by the disease.

3. The number of invaded houses supplied in whole or in part, directly or indirectly, with the suspected milk.

4. The number of cases occurring in invaded houses so supplied.

5. The number of houses supplied with the suspected milk.

14. Veterinary Record, 1899, April 8.
15. Brit. Med. Jour., 1899, ii, p. 580.
16. Jour. Hyg., Cambridge, 1901, i, p. 85.
17. Jour. Hyg., Cambridge, 1902, ii, p. 194.

6. The relative proportion of houses so supplied to those supplied by other dairies.
7. The time covered by the epidemic.
8. The location of the case or cases from which the milk became contaminated.
9. The relation of the original case to the milk.
10. The time relation of the original case to the epidemic.
11. The special incidence of the disease among milk drinkers.
12. The elimination of other common carriers of infection.
13. The effect on the epidemic of closing the dairy or taking such measures as would eliminate the possibility of milk contamination from the suspected focus.
14. The finding of the specific organism in the milk.

TUBERCULOSIS.

The definite relationship of bovine and human tuberculosis constitutes a problem which has not been easy of solution. The work of many investigators would tend to show, however, that man is capable of infection with bovine tubercle bacilli and that a part at least of human tuberculosis is of bovine origin.

The British Royal Commission on Tuberculosis, out of 60 human cases examined, found 14 apparently of the bovine type. The German commission found 6 such out of 56 investigated.

If man is capable of infection with bovine bacilli, the question naturally arises as to the effect of the ingestion of milk containing infectious material from tuberculous cows. That calves and hogs fed on such milk become readily tuberculous is well known. In looking for examples of ingestion tuberculosis in man, many have considered that the initial and graver lesion would be found along the alimentary tract, especially in the form of intestinal or glandular tuberculosis. This, it would seem, need not necessarily be so. The tonsils frequently show tuberculous lesions and at times may be a portal of entry for bacilli, producing more prominent lesions elsewhere. Hogs readily develop tonsillar lesions when fed on tuberculous material. From the tonsils the infection may extend through the cervical lymphatics to the mediastinal lymph glands and the lungs.

There is much experimental evidence which would seem to show that tubercle bacilli may pass through the tonsils or the mucous membrane of the intestines without at times leaving a surface lesion to show the point of entry, and that this is especially true for the intestines when the bacilli are suspended in a fatty emulsion, or introduced with fatty food, in which case they may be found in the chyle in a few hours. Various workers have shown that tubercle bacilli injected into the stomach of certain animals through a tube passed down the esophagus or through an incision in the abdominal wall may reach the circulation and the lungs in a short time. Ravenel and Reichel[18] injected tubercle bacilli into the stomachs of guinea-pigs and in twenty-eight out of fifty cases found them in the lungs in less than 24 hours, and in some of the cases in as short a time as four hours.

TABLE 1.—TUBERCLE BACILLI IN MARKET MILK.

Author.	Number Samples Examined.	Tub. Bac. F'n'd in.	Per Cent. Showing Tub. Bac.	Place.	Remarks.
(A) St. Frils	28	4	....	Copenhagen.	
(A) St. Frils	33	0	....	Copenhagen.	
(A) Obermüller	40	3	....	Berlin.	
(A) Obermüller	13	8	....	Berlin.	
(A) Petri	64	9	....	Berlin.	
(A) Buege	9	2	....	Halle.	
(A) Massone	33	3	....	Genoa.	
(A) Ott	43	5	....	Schwäbisch-Gmünd.	
(A) Ott	28	3	....	Schwäbisch-Gmünd.	
(A) Florentini	54	4	....	Milan.	
(A) Sacharbekoff	71	4	....	St. Petersburg.	
(A) Kudinow	40	1	....	Dorpat.	
(A) Bujwid	60	2	....	Krakau.	
(A) Nonewitsch	22	12	....	Wilna.	
(A) v. Hellens	21	8	....	Helsingfors.	
(A) Girard	30	6	....	Paris.	
(A) Klein	100	7	....	London.	
(B) Schroeder, E. C.	19	1	....		
(B) Ernst, H. C.	33	1(?)	....		
(B) Ascher	17	1	....	Königsberg.	
(B) Kauthack	16 dairies	9	....		
(B) Proskauer, Seligmann and Croner	9	5	55.5	Berlin.	
(B) Anderson	223	15	6.72	Washington.	
(C) Delépine	110	19	17.2	Manchester.	1897-98.
(C) Delépine	344	39	11.3	Manchester.	1900.
(C) Delépine	438	42	9.5	Manchester.	1901.
(C) Delépine	423	36	8.5	Manchester.	1902.
(C) Delépine	436	54	12.3	Manchester.	1903.
(C) Delépine	431	42	9.7	Manchester.	1904.
(C) Delépine	704	61	8.1	Manchester.	1905.
(C) Delépine	704	47	6.6	Manchester.	1906.
(D) Medical Officer of Health, Liverpool	1,119	23	2.	Liverpool.	Samples of town milk, 1896-1902.
	1,124	84	7.4	Liverpool.	Samples of country milk, 1896-1902.
(E) Cappelletti	27	0	0	Padua.	1896.
(E) MacFadyen	77	17	22.		1899.
(E) Beck	56	17	30.3	Berlin.	1900.
(E) Tonzig	38	0	0	Padua.	1901.
Total	7,097	594	8.37		

(A) Jensen, (C. O.): Essentials of Milk Hygiene, English Edition, 1907, p. 75.
(B) Anderson, (J. F.): Bull. 41, Hyg. Lab. U. S. Public Health and Marine-Hospital Service, Washington, pp. 163-192.
(C) Delépine, (S.): Medical Chronicle, March, 1908.
(D) Swithinbank and Newman: Bacteriology of Milk, pp. 215-219.
(E) Cornet: Die Tuberkulose, 1907, pp. 122-123.

TUBERCULOSIS AMONG CATTLE.

Little need be said of the prevalence of tuberculosis among cattle. This has been emphasized so often and

18. Jour. Med. Research, xviii, No. 1, pp. 1-18.

in so many ways that it is appreciated by all. Exact information on the subject in this country is relatively scarce. Enough is known, however, to give a fair idea of its extent. Russell and Hastings give the percentage of infected cattle found in several states by the injection of tuberculin. The percentage varied from 3.9 in Vermont to 50 in Massachusetts. These figures, of course, are not absolute, inasmuch as in no case were all cattle tested and in many only suspected herds were so treated. From the recorded tests of 20,930 head with tuberculin in Great Britain, 5,441, or 26 per cent., were pronounced tuberculous (Salmon).[19]

Veranus A. Moore[20] states that the reports obtained from practicing veterinarians as to the prevalence of tuberculosis among the cattle in New York show that, "of the 8,640 tested, 3,111, or 36 per cent., reacted (to tuberculin). Of the 364 herds tested, 265, or 72.8 per cent., were infected, leaving but 27.2 per cent. of the herds examined free from this disease." On the other hand, official tests made by the State Commissioner of Agriculture (1903-1906) made on supposedly diseased herds "revealed a much smaller percentage of diseased animals and a much larger proportion of uninfected herds than was found by the private tests. Of the 3,088 animals tested, 673, or 21.79 per cent., reacted, and of the 262 herds tested, but 121, or 46.18 per cent., were diseased, leaving 53.82 per cent. uninfected." The combined private and official tests gave information of 626 herds, including 11,728 animals, and showed that 61.7 per cent. of the herds and 32.26 per cent. of the cattle reacted to the tuberculin test. The cattle of New York are possibly neither better nor worse than those in many other states.

It is fair to assume that in many sections of the country the percentage of tuberculous cattle will average between 15 and 40.

It has been held by many that milk from tuberculous cows is not dangerous and does not contain tubercle bacilli, unless the udder is the seat of tuberculous lesions, and this hypothesis has been the basis on which many have worked. But it has been well demonstrated that this is not a safe basis for action. Schroeder and Cotton have conducted experiments which seem to show that not only do cows with udder lesions secrete tubercle bacilli in milk, but those having no demonstrable lesions, but reacting to tuberculin, may secrete them, and that those with marked lesions in other parts of the body do so frequently. But the question of the secretion of tubercle bacilli in milk is not the only one to be considered, for the same authors have shown that, although milk may be secreted free from bacilli, it may be infected by the feces which contain the organisms because of intestinal lesions or swallowed sputum. The vaginal discharge also at times contains tubercle bacilli. In view of the above, the question as to whether or not tubercle bacilli are secreted in the milk of tuberculous cows without udder lesions is immaterial.

TABLE 2.—TUBERCLE BACILLI IN MARKET BUTTER.

Author.	Year.	Place.	Butter Samples Examined.	Tubercle Bacilli Found in.	Per Cent. Containing Tub. Bac.
(A) Brusaferro	1890	Turin.	9	1	11.1
(A) Roth	1894	Zürich.	20	1	5.
(A) Obermüller	1895	Berlin.	14	14	100.
(A) Schuchardt	1896	Marburg.	42	1 (?)	2.4
(A) Groning	1897	Hamburg.	17	8	47.
(A) Petri	1897	Berlin.	102	33	32.3
(A) Rabinowitsch	1897	Berlin.	30	0	0
(A) Rabinowitsch	....	Philadelphia.	50	0	0
(A) Hormann and Morgenroth	1898	Berlin.	10	3	30
(A) Rabinowitsch	1899	Berlin.	15	2	13.3
(A) Ascher	1899	Königsberg.	27	2	7.4
(A) Jäger	1899	Königsberg.	3	1	33.3
(A) Coggi	1899	Mailand.	94	2	2.12
(A) Korn	1899	Freiburg.	17	4	23.5
(A) Weissenfeld	1899	Bonn.	32	3	9.36
(A) Obermüller	1900	Berlin.	10	7	70.
(A) Bonhoff	1900	Marburg.	28	0	0
(A) Herbert	1900	Württemberg.	100	0	0
(A) Herbert	1900	Berlin.	20	0	0
(A) Herbert	1900	München.	5	0	0
(A) Merkl	1901	Wien.	43	0	0
(A) Herr u. Beninde	1901	Breslau.	45	7	15.5
(A) Gehrke-Löffler	1902	Greifswald.	8	7	88.
(A) Gehrke-Löffler	....	Greifswald.	17	1	6.
(A) Aujeszky	1902	Budapest.	17	3	17.6
(B) Hellström	....	.....	12	1	8.
Total	....	.....	787	101	12.8

(A) Cornet: Die Tuberkulose, 1907, pp. 122-123.
(B) Swithinbank and Newman: Bacteriology of Milk, p. 221.

TUBERCLE BACILLI IN MARKET MILK.

With a large percentage of dairy cattle tuberculous we may expect to find tubercle bacilli in market milk and milk products. This has been done frequently, as will be seen from the accompanying tables.

Other diseases in the epidemiology of which milk plays an important part are dysentery, epidemic diarrhea, cholera, malta fever and milk sickness. The last-named disease has been an unsolved problem until the recent work of Jordan and Harris.[21]

THE RESPONSIBILITIES OF MUNICIPALITIES IN THE OHIO VALLEY FOR EPIDEMICS OF TYPHOID FEVER.*

W. FOREST DUTTON, M.D.
PITTSBURG, PA.

When a country, or any part thereof, becomes, so to speak, a hotbed of disease, which interferes with the normal conditions of commercial activity and human progress, is it not time for a live discussion of the problem in an assembly of the people?

When the death rate from any one epidemic exceeds 10 for 100,000 population, immediate action is necessary; but in the wild pursuit of wealth, health seems to be a factor of minor importance.

The assaults that epidemic diseases have made on the sanitary breastworks of the Ohio valley municipalities in the last fifty years have met with little or no resistance. These diseases have resulted in death and disaster. Is it not the duty of the people at large, as well as that of the sanitarian, to see that this miscarriage of civil rights is remedied?

An important part of the sanitarian's knowledge is that which relates to the history of epidemic diseases which at various periods have devastated areas of an inhabited country.

In this paper the history of typhoid epidemics in the Ohio Valley will be briefly traced, in the light of a knowledge of the habits and causes and principles and methods of prevention.

From all that can be learned from older practitioners and from the literature of the times, typhoid has

19. U. S. Dept. of Agriculture, Bureau of Animal Industry, Bulletin 38, 1906.
20. Bovine Tuberculosis in New York State, 1907.

21. THE JOURNAL A. M. A., May 23, 1908, p. 1865.
* Read in the Section on Hygiene and Sanitary Science of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

existed in the Ohio Valley since the early settlements in this region. In fact, the disease was not known as typhoid at that early date, but was called typhus, malaria, cholera, enteritis and other names.

James Lind of London, England, a traveler in this country in the early part of the last century, described a disease prevalent in the Ohio and Mississippi valleys, which we know now to have been typhoid fever. Robert Dunglison, in 1844, wrote of typhoid as present in the Ohio Valley. It is strange, and altogether unfortunate that we do not possess accurate accounts of epidemics which occurred in the early settlements. We do know, however, that whole colonies were nearly depleted by certain epidemics; but the information that can be depended on with any degree of accuracy does not antedate 1850.

On account of the assumed sanitary conditions of the municipalities in the Ohio Valley, I will recite facts as they have existed, which will give an insight to the terrible situation prevailing during the last fifty years.

Typhoid is usually transmitted by the water and milk supply, though solid forms of food play an important rôle in the conveyance of this disease.

In the discussion of the water supply I shall begin at the parting of the ways. Pittsburg receives its water supply from two rivers, the Allegheny and the Monongahela. It is estimated that 150,000 people receive their supply from the Monongahela river, which, according to the city bacteriologist, is free from bacteria one-tenth of the time, owing to free sulphuric acid. This water is purified (?) by mechanical filtration. Some 350,000 people receive water from the Allegheny river. One intake of this river is located at Montrose, ten miles above the city, but the main supply, at present, is from the intake at the Brilliant pumping station, which is situated within the city limits, and exposed to sewage and mill refuse.

Dr. James F. Edwards, superintendent of the bureau of health, Pittsburg, on the occasion of the pumping of the first filtered water from the new filtration plant, Dec. 21, 1907, made a recapitulation of what he calls "Pittsburg's thirty-year epidemic of typhoid": Since 1878, 50,000 people have been stricken with typhoid in Pittsburg, and 7,615 died. In 1906 there were 5,729 cases and 608 deaths. His report further shows that one person died out of every ten who were stricken.

The above statement is certainly appalling, but the half has just been told. The towns in the immediate vicinity of Pittsburg make up a population equal to, or greater than, that of Pittsburg proper, and it is from these towns that Pittsburg draws a great portion of her office men and women and laborers in general. From the infected sources in Pittsburg they contract typhoid. These people are taken ill, and remain at their homes until they recover or die, as the case may be. Thus, conservatively speaking, the death rate from typhoid for which Pittsburg is immediately responsible, is double that mentioned by Dr. Edwards.

Dr. Matson, bacteriologist to the bureau of health, Pittsburg, stated to me that for the years 1902, 1905, and 1907 the death rate for 100,000 population was 140, 107 and 134, respectively. He stated, further, that the death rate had reached as high as 150 in other years. This figure is the highest of any city in the world for typhoid.

Should we not consider the fact that Pittsburg is also the source of the typhoid for surrounding towns, and that the rate should be placed much above 200?

As a result of an investigation by the Pittsburg authorities, it was figured that the cost of typhoid to Pittsburg for the year ended June, 1907, was $721,436.

In 1907 there were 5,729 cases and 608 deaths. Taking Biggs' estimate on the value of human life and the expenses incidental to serious illnesses, the loss to Pittsburg was $2,057,800. The loss since 1878, for 50,200 cases and 7,615 deaths would be $21,462,800.

The city of Pittsburg has expended $7,500,000 on a filtration plant up to the present time, but before it is completed this plant will scarcely supply half the demand.

According to E. E. Lanpher, assistant engineer to the bureau of water, $12,000,000 must be spent in the next ten years to double the plant's capacity.

Mayor Guthrie says in an interview:

"The eyes of the whole country are on Pittsburg. We have the finest filtration plant in the world, and the results which are obtained here in wiping out the typhoid scourge will exercise great influence on other cities." He also remarked that the fourteenth ward commonly had more typhoid in it alone than the whole of London.

The coal fields along the Allegheny river are practically undeveloped. Large industrial concerns are being built along its banks. We can thus realize the absurdity of filtration plants with water derived from such a source. Artesian or drilled wells, if sufficient in number, could furnish pure water, or water could be obtained from mountain streams, or even lakes, and this method could not but result in a great saving of lives and dollars to this municipality.

CONDITIONS IN VARIOUS MUNICIPALITIES.

In order to be able to furnish exact data on typhoid in the Ohio Valley, I addressed a circular letter to the boards of health of twenty municipalities.

From Dr. W. E. Kerr, Steubenville, Ohio, I received the following:

"We get our water from the Ohio river, unfiltered—a blot to our fair city. Many of the better class of people drink spring water, which is carted from house to house. It is noticeable that habitual drinkers of this spring water do not get typhoid. We have no health report for 1907 or any other year, but hope to get one started soon. We are not required to report our typhoid cases to the board of health. Each physician has from one to twenty cases at all times. Typhoid fever is endemic in Steubenville, seldom epidemic. The nearest approach to an epidemic was during the winter of 1906-1907, when several hundred cases occurred. The city is never free from typhoid. The milk supply is not inspected, though probably compares favorably with that of other cities."

Dr. W. H. McLain, Wheeling, W. Va.:

"Wheeling at present has no water supply other than the Ohio river water in its natural state. A citizen's committee recently spent about $1,800 in putting down some test wells just above the city, had water examined, and made recommendations to the council in a public meeting. Public interest in the matter is great, and I think ultimately a number of wells will be in use, with the river bed itself as a filter. We have had typhoid fever here as far back as there are any records in the office."

In the report of the department of health of the city of Wheeling for 1907 I find 39 deaths from typhoid for the 40,000 population, a decrease of 13 as compared to 1906. Typhoid is not a reportable disease in this

city, and I am of the opinion that the above figures are rather conservative. The collection of garbage is not controlled by the board of health. Vaults are inspected. Dairy farms and milk are inspected.

Dr. Mark A. Brown, Cincinnati, Ohio, forwarded a weekly report of March 20, 1908, from which I learn that up to April 1, 1907, the people of Cincinnati were for the most part drinking badly polluted water. After that date Cincinnati began to obtain water from less polluted sources, and gradually improved the supply until November, 1907, when filtered water was introduced. Reduced to figures, there were 606 cases of typhoid with 81 deaths from April 1, 1907, to Nov. 1, 1907, as against 1,407 cases with 155 deaths for the corresponding months of the previous year. Comparison of four months' pure water service with the same period of a year previous shows a reduction of 604 cases and a saving of 42 lives. An estimation is given, including 42 lives at $1,500 each, and a saving of expense of 604 cases at $200 each, which, on an average, would total $183,800. The death rate for 1905, 1906 and 1907 was 155, 239 and 157, respectively. The milk supply is also inspected and examined.

As before stated, reports and statements were solicited from other Ohio river cities and towns, but I received no further replies.

I am not surprised, in view of the existing conditions, at the reluctance of the officers of the boards of health to furnish statements. In order to save the municipalities the disgrace of publicity and the officers the humiliation of reports, I will refrain from anything other than general comment.

I have tabulated the death rate for 100,000 of population in a few Ohio Valley cities and towns for the year 1902, as follows:

City.	Population.	Source of Supply.	Rate.
Dayton, Ohio	90,000	Driven wells	25
Covington, Ky.	45,000	Ohio River	35
Indianapolis	170,000	White River	41
		Driven wells and White River	41
Louisville, Ky	210,000	Ohio River	48
Cincinnati	330,000	Ohio River	52
Newport, Ky.	30,000	Ohio River	65
Wheeling, W. Va.	40,000	Ohio River	52
Steubenville, Ohio	17,000	Ohio River	80

CLINICAL VARIETIES OF TYPHOID.

The clinical varieties of typhoid generally considered are:

1. Typhoid, as distinguishing the severe form;
2. Paratyphoid;
3. Abortive; here referred to according to the severity of the type, which varies between the limits of extreme mildness and extreme severity.

The majority of cases are in the first group. The patients in this group show, as a rule, profound intoxication from the onset. It is from this form of the disease that we get a high mortality rate.

The second and third groups are rare as primary affections, but more or less common in second attacks.

PROBLEM OF UNPOLLUTED WATER SUPPLY.

A problem of great magnitude is the supply of unpolluted water for the cities and towns in the Ohio Valley. So long as we have the vast population and the industrial activity in this valley, just so long will we have polluted streams. This, however, does not contraindicate an attempt to improve existing conditions, provided such improvements can be made.

The suggestions I will make apply to towns as well as cities, and are as follows:

1. Purification of sewage, and discharge of only the purified effluent into the streams. This includes also the manufacturing wastes.
2. Disposal of excreta and garbage by cremation.
3. Inspection of privy vaults and cesspools, and their maintenance in a sanitary condition.
4. Inspection and examination of all well, cistern, and other waters not procured from the regular system of supply.
5. Vigilant inspection of water service in order to insure economy in the use of water.
6. Inspection of supply mains to remedy defects and to avoid accumulation of dirty, stagnant water.
7. Daily examination of water from the regular system of supply.
8. The maintenance of pure water supply whether filtered, river, lake, well, spring, or that from other sources.
9. Legislation that will provide for a pure water supply and officials who will see to it that the laws are enforced.
10. Literature published monthly and distributed to the people concerning contagious and infectious diseases; their cause and prevention.
11. Weekly reports showing the exact sanitary status of the municipality.
12. An efficient physician, assisted by a corps of experts, at the helm of each and every board of health.

It may be argued that the river water is the only available source of water supply, but such is not the case. A pure supply may be secured from fresh water streams, springs, lakes, and artesian wells any place in the Ohio Valley at minimum expense. If we consider, for a moment, the source of water supply of Munich, Berlin, Vienna, Stockholm, Paris, London, and Brooklyn, we have a suggestion that may aid us in an endeavor to secure a pure water supply for municipalities in the Ohio Valley.

MILK SUPPLY.

Another, and most important factor, inviting attention is the milk supply. The purity of this essential food element should be provided for by an act of legislation. Examiners should be appointed to inspect dairies, and to examine all milk before it is offered for sale.

All proprietors of dairies and dealers should be held responsible for any violation of law.

The milk in Pittsburg, as in many other Ohio Valley municipalities, is to say the least, polluted. Taking into consideration a dirty dairymaid, the shipping of milk in insufficiently cleansed and non-sterilized cans, and a filthy milk depot, is it to be wondered at that the milk supply is not only inferior but often a menace to health?

CONCLUSION.

What I have said concerning the few cities mentioned, refers, in general, to all municipalities in the Ohio Valley, and indeed to many others. I have no apologies to make in behalf of Ohio Valley municipalities. They are responsible for the conditions as they exist. I regret that we do not have a better report to offer to the world.

I have the highest regard for Drs. Edwards and Matson, of Pittsburg; McLain, of Wheeling; Brown, of

Cincinnati, and others associated with them in their great work. These men have accomplished much under most adverse circumstances. They honor themselves and the cities they represent. May we have more of such men in the Ohio Valley municipalities.

624 Pittsburg Life Building.

CHOLERIFORM DIARRHEA OF COLD WEATHER —"WINTER CHOLERA."*

OSCAR C. BREITENBACH, M.D.
President Michigan State Water Commission.
ESCANABA, MICH.

Winter epidemics of bowel disturbances, characterized by an intestinal flux, have become a problem in some of our large cities during the past few months. Simulating, in some respects, in their toxemia and collapse, the symptoms engendered by the vibrio of Koch, these endemic and epidemic bowel disturbances are popularly known as "winter cholera."

It is the purpose of this paper to detail observations on recurrent epidemics of so-called "winter cholera" at Escanaba, Mich., a city of approximately 10,000 inhabitants. Escanaba is situated on Little Bay de Noc, an inlet of Green Bay. The principles evolved from the study of such epidemics will serve to explain the cause of bowel disturbances that have become in some cities a very momentous problem, taxing the ingenuity of sanitarians.

In the Sixth Annual Report of Mortality Statistics, published in 1905 by the Department of Commerce and Labor, Washington, D. C., the editor says that the highest general death rate from diarrhea and enteritis, among the minor cities of the United States in 1905, was that of Escanaba, Mich., with a death rate of 416.9 per 100,000 of population. Only four other smaller cities of the United States, as classified, had death rates exceeding 100 per 100,000 of population, from typhoid fever during the year 1905; Escanaba, in this instance, showing a death rate of 182.8 per 100,000 of population. It is then stated parenthetically that the typhoid mortality in Escanaba for 1905, although high, was much lower than the rate for 1904, which was 351.4 per 100,000 of population. These facts, as they concern a community in which "winter cholera" and "sporadic cholera" have been prevalent for a decade or more, suggest the predominance and scope of intestinal disorders in this community, a survey of which suggests itself as profitable study. Not alone as a means toward establishing the true nature of the hybrid "winter cholera," but also as it furnishes the inhabitants of the Great Lakes States an incentive for an active cooperation in the very opportune work inaugurated in the Lake Michigan Water commission. This body was recently organized, with subcommittees in the Great Lakes States, for the express purpose of studying the question of water pollution as it pertains to Lake Michigan and Great Lake cities.

SYMPTOMATOLOGY OF WINTER CHOLERA.

In the introductory paragraph I attempted, incompletely, to define the term of winter cholera, but in order that I may give a clearer picture of the symptom complex I shall cite in a more specific way what, subjectively and objectively, characterized winter cholera in the epidemics that I shall briefly review. The symptomatology is most varied. I say varied because of the fact that the histories of many cases would conform to the average text-book description of such diseases as acute ileocolitis, or acute catarrhal dysentery, acute gastroenteritis, dysentery, Asiatic cholera, atypical typhoid and typhoid. I hesitate, therefore, to describe the symptoms of winter cholera as manifested in any one individual as being typical of the term, the scope of which will become evident as I proceed. There were present in the epidemic referred to and in epidemics prior to and since then, all gradations from the type of patient with but a very slight indisposition, and never bedridden to the extreme type in which the patient is taken suddenly sick and becomes moribund in from forty-eight to seventy-two hours, the prostration and collapse, indeed offering a very good picture of Asiatic cholera. To facilitate matters, therefore, I shall describe a few types, covering the many phases of this disturbance.

TYPES OF THE DISEASE.

TYPE 1.—Individual enjoying good health is suddenly taken with severe colicky pains, the bowel passages are increased from two to four a day. The stools are feculent, very offensive, at first semi-solid, finally watery. These attacks are of short duration, seldom extending over a period of more than forty-eight hours, at the end of which time the patient may assume his former well-being. Because of the mildness of this type of disease it seldom comes to the notice of the physician.

TYPE 2.—Individual enjoying good health is suddenly taken with feeling of malaise, nausea and bilious vomiting. With or without these acute stomach symptoms at varying intervals, sharp colicky pains and a severe diarrhea appear. The stools are feculent, but very thin and offensive, and may number from one to twenty a day. Objective symptoms are practically negative. Temperature is normal, pulse normal or slightly accelerated. The diagnosis of this condition is based on the acute onset, the characteristic gastrointestinal disturbance, and the usual course of the disease. Patient is never really incapacitated for work, resorts to home remedies, or is subjected to routine treatment of castor oil in large doses, followed by astringents and bowel antiseptics administered by his medical adviser, and is well in from twenty-four hours to three days.

TYPE 3.—This type presents a most unusual array of symptoms. The cases in the history of their onset simulate typhoid yet in their course and mortality differ materially from typhoid. Bowel symptoms vary in intensity, assuming in some few cases a dysenteric character, while in others there is constipation. Temperature in this class of cases varies from 98.6 to 104 F., is continuous but irregular, and therefore, in this respect, entirely at variance with the remittent character of typhoid. The tongue is heavily furred, showing a bright red tip and margins. Delirium in these cases is of frequent occurrence. The Widal and diazo reactions are negative.

TYPHOID MORTALITY RATE.

As these statistics, pertaining to this isolated epidemic of 1903 and 1904 are interesting, so more extended statistics on other gastrointestinal disorders, as they appeared in this community, are not alone interesting, but valuable in establishing the true relationship of winter cholera. Although the first mention of winter cholera, as a cause of death, was made in 1898, the older inhabitants of this city can readily testify to the fact that typhoid and other bowel disturbances for years previous claimed a high mortality in the symptomatology

* Read in the Section on Hygiene and Sanitary Science of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

*Because of lack of space, the article is here slightly abbreviated. In the parts omitted, Dr. Breitenbach describes the outbreaks of winter cholera in Escanaba, and gives some of the circumstances in connection with the building of the hospital sewer and the new water intake. The complete article appears in the Transactions of the Section and in the author's reprints.

outlined to you. Escanaba was granted registration of deaths in 1897. I regret that there is no possible way of arriving at the actual death rate that these diseases allotted this community previous to that year. Such records, however, as the local registrar is able to furnish since 1898, net the study of bowel disturbances in this municipality much interesting data.

It will be noted in Table 1 that typhoid in a significant rôle has since 1898 been associated with a high death rate. A study of this table will show the presence of typhoid to an extent that, in the light of sanitary achievement elsewhere, strongly reflects, not alone on the

TABLE 1.

CASES AND DEATH RATE OF TYPHOID IN ESCANABA.

Year.	Estimated Population.	Cases.	Deaths.	Death Rate per 100,000.
1898	10,500	20	3	28
1899	10,500	60	7	66
1900	10,093	140	14	138
1901	10,444	50	5	47
1902	10,795	70	7	64
1903	11,146	40	4	35
1904	11,500	300	40	367
1905	11,500	210	23	227
1906	11,500	120	12	104
1907	11,500	270	28	246

civic authorities, but also on those of us, who as medical advisers, faithful to our trust, should ever be the guardians of public health. Typhoid fever, in 1904, as this record shows, was netted the maximum death rate of 367.8 per 100,000 of population, in the year 1898 the minimum of 19 per 100,000 of population. During the past decade, four successive years, have netted the community a death rate of 100 per 100,000 of population.

The mortality of bowel disturbances other than typhoid, and which are embraced in the term winter cholera, I have classified in Table 2. It will be noted in the study of this table, that these gastrointestinal disorders maintained a death rate varying from 69 to 426 per 100,000 of population. These data, though suggestive, convey in but a meager way the scope and magnitude of bowel diseases that, from year to year, have been the curse of this municipality.

TABLE 2.

DEATHS FROM SO-CALLED WINTER CHOLERA SINCE 1898.

Year.	Estimated Population.	Deaths.	Death Rate per 100,000.
1898	10,500	10	90
1899	10,500	8	76
1900	10,093	25	247
1901	10,444	15	143
1902	10,795	22	203
1903	11,146	18	161
1904	11,500	37	321
1905	11,500	49	426
1906	11,500	28	243
1907	11,500	8	69

With such facts as I have given, the question of etiology becomes an interesting one. It will be noticed that the figures in Tables 1 and 2 placed the death rate in Escanaba of these bowel troubles far in excess of other cities in the United States. (See Table 3.) In any endeavor toward determining the causal factor in similar outbreaks, the one avenue disseminating disease never to be overlooked, is, of course, water. It is an axiomatic truth in sanitary science that typhoid and allied troubles would dwindle into insignificance in any municipality, if pure water and milk could be served to the householder. It is important and essential in such epidemics, therefore, that the positive or negative relationship of water be established, and indeed, in this community, the history of water supply furnishes instructive facts.

ESCANABA'S WATER AND SEWER SYSTEM.

Until 1887, Escanaba's only source of water for domestic purposes was that obtained through driven wells. In 1886, a franchise was granted to a corporation for a supply of water, the source of which should be Little Bay de Noc. In order that I may give a clear picture of such factors as were of importance in these epidemics, it may be well to direct attention to the maps in Figures 1 and 2. These suggest what is essential in the bay bed, its currents and also winds, as these have a bearing on the subject. It will be noticed in Figure 2 that the flow of the main current of water is south, and the winds prevailing are southerly. Sand shoal formations are very characteristic of the bay, and in a material way influence the main current. On account of these formations the main current is confined by very sharp and definite channel banks. Escanaba is built on a sandy peninsula (Fig. 1), known as Sand Point. From the south shore of this peninsula (Fig. 2) a sand shoal extends out into the bay, forming the bay bed for a distance of 1,500 to 3,000 feet. This exists as a plateau, until an abrupt dip occurs, where it serves the purpose of a very sharp and clearly definite channel bank.

TABLE 3.

ANNUAL AVERAGE DEATH RATE FROM TYPHOID PER 100,000 OF POPULATION, 1901 TO 1905.

Pueblo, Colo.	155.7	Cincinnati, Ohio	55.9
Niagara Falls, N. Y.	144.7	Louisville, Ky.	55.4
ESCANABA, MICH.	136.0	Kansas City, Mo.	53.7
Pittsburg, Pa.	129.6	Philadelphia, Pa.	52.1
Steelton, Pa.	119.3	Johnstown, Pa.	50.8
Fresno, Cal.	113.2	Columbus, Ind.	48.8
Allegheny, Pa.	109.6	CLEVELAND, OHIO	49.5
Youngstown, Ohio	102.0	Denver, Colo.	47.2
SAULT STE. MARIE, MICH.	100.5	Indianapolis, Ind.	45.4
Augusta, Me.	93.2	Memphis, Tenn.	44.4
New Castle, Pa.	97.5	New Orleans, La.	40.9
McKeesport, Pa.	92.6	Cortland, N. Y.	40.3
Bangor, Me.	89.7	Minneapolis, Minn.	38.3
Cohoes, N. Y.	89.1	St. Louis, Mo.	37.2
Petersburg, Va.	88.9	Baltimore, Md.	35.8
Lynchburg, Va.	86.3	Toledo, Ohio	35.8
Ithaca, N. Y.	86.1	Philipsburg, N. J.	35.3
Jacksonville, Fla.	84.4	CHICAGO, ILL.	28.5
Watertown, N. Y.	84.1	San Francisco, Cal.	27.0
Leadville, Colo.	83.6	BUFFALO, N. Y.	26.8
Hammond, Ind.	77.8	Brooklyn Borough, N. Y.	21.0
Hudson, N. Y.	77.5	DETROIT, MICH.	20.5
Salt Lake City, Utah	77.7	Bristoltown, Conn.	20.5
Columbia, Pa.	76.6	Providence, R. I.	20.2
Marietta, Ohio	75.3	Scranton, Pa.	20.0
Muscatine, Iowa	75.0	Paterson, N. J.	20.3
Biddeford, Me.	74.6	Richmond Borough, N. Y.	19.3
Mobile, Ala.	73.0	Omaha, Neb.	19.9
Harrisburg, Pa.	72.5	Newark, N. J.	18.8
Columbus, Ohio	71.1	Queens Borough, N. Y.	18.5
South Bethlehem, Pa.	70.9	New York, N. Y.	18.1
Allentown, Pa.	68.9	Fall River, Mass.	18.0
MENOMINEE, MICH.	68.5	Jersey City, N. J.	18.0
ASHTABULA, OHIO	66.5	MILWAUKEE, WIS.	18.0
Vincennes, Ind.	64.5	Bronx Borough, N. Y.	16.7
Jacksonville, Ill.	63.7	Manhattan Borough, N. Y.	16.1
Wichita, Kan.	62.1	Syracuse, N. Y.	16.0
Washington, Ind.	60.7	Worcester, Mass.	13.6
Alexandria, Pa.	60.3	Rochester, N. Y.	13.7
Meadville, Pa.	58.2	St. Paul, Minn.	12.4
Jeffersonville, Ind.	57.4	St. Joseph, Mo.	11.3
Washington, D. C.	56.9		

Great Lake Cities given in CAPITALS.

The water plant was installed in 1886. When completed, the water was obtained through an intake 1,500 feet in length, extending out into the bay on the shoal described. The crib drew water at a depth of twenty feet. In order to insure adequate fire protection, at this time, a short intake was constructed, drawing water, as did the long intake, from off this sand shoal. This short intake was 258 feet from the shore, the crib at a depth of five feet. The pumping station, at its initial services, consisted of the intakes described, a sand bottom settling tank and the pumping mechanism.

With the introduction of faucet water and the increasing density of population, the rural methods in vogue for the disposition of sewage became antedated and were supplanted by a sewer system. This system was put into commission in 1891, and though devised and approved by sanitary experts, we find the main outlets discharging into a stream of water which flows

around Sand Point, thence down and out of the bay in a current which flows south, toward the water intake (Figs. 1 and 2). Human intelligence saw fit to have the inhabitants of this city partake of water thus polluted, not realizing that such a procedure implied an inevitable sacrifice of human lives.

Insidiously, bowel disorders, that entailed the loss of life, began to appear. Many of the older inhabitants, in a very forcible and intelligent way, at this time, began to question whether or not the city was getting a wholesome water. Pressure was brought to bear on the corporation supplying water to consider the question of quality of water, since it was looked on as a suspicious factor. It was urged that the intake was too close to the shore, within range of pollution, not alone from the shore, but also from the sewer outlets. This argument appeared reasonable and the Escanaba Water Company seriously considered the extension of 440 feet, so that the intake then measured 1,940 feet, bringing the crib to the channel bank, but not into deep water. By dredging, this intake was made to draw water through a crib at a depth of forty-five feet, still from off the shoal (Fig. 2).

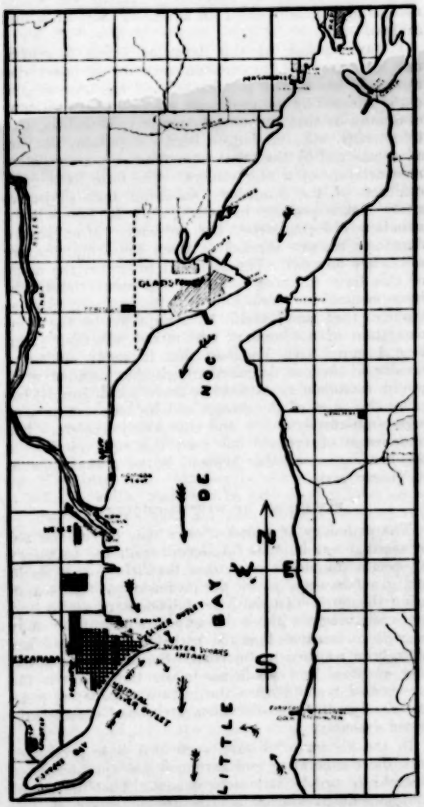


Fig. 1.—Map showing the location of Escanaba, Mich., on Little Bay de Noc, and other towns in the vicinity. The arrows show the general direction of the current and indicate how the sewage from the town of Escanaba is carried down past the water works intake.

RELATIONSHIP OF WINTER CHOLERA TO TYPHOID.

Cause and effect never loomed up more clearly than they do in this municipality. The relationship of winter cholera and typhoid suggests itself as self-evident. In order that the subject may be done justice, however, it may be well to detail observation on the history of winter cholera. This dates back to the year 1881, when first mention was made of it in the transactions of the Michigan State Board of Health. Although no attempt was made at this time to establish the causal factor, it is stated that this form of bowel disturbance was generally prevalent throughout the southern portion of the state, and also in one or two state institutions. We next hear of it in Escanaba as a term used synonymously with "sporadic cholera" in 1898. Water pollution at this time was suspected, but no further work towards determining the positive causal factor is recorded. The Indiana State Board of Health, in their report of 1901 and 1902, made mention of an epidemic of winter cholera occurring in Michigan City. Investigation at this time established the relationship of polluted water.

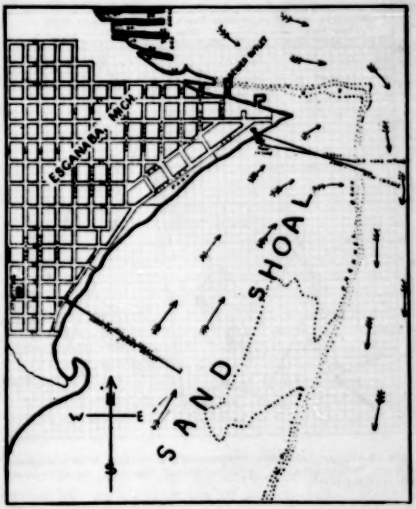


Fig. 2.—Map of part of Escanaba, Mich., showing the relation of the sewer outlet of the town and the sewer outlet of the Delta County Hospital to the intake of Escanaba's water supply. Arrows indicate the direction of current.

The prevalence of winter epidemics of gastrointestinal disease in Chicago and Lansing, during the winter months just passed, have been the means of introducing this term into the respective localities. With reference to the Lansing epidemic, *Public Health*, February, 1908, published by the State Department of Health, in part says: "While the profession seems to

be divided as to the probable cause of the epidemics, many believing them to be due to a mixed infection, the contamination of the Townsend street wells must be looked on as a prominent factor in causing the trouble, and is, I believe, so recognized by the profession, many of them believing it to be the only cause." Chicago seems to be in a quandary as to a positive etiology.

Voltaire has so aptly said that "ambiguity has been so necessary a vice in all languages formed by what is called custom and chance." It is true that diarrhea, in epidemic form, appears many times when it is quite impossible to discover adequate cause, yet there can be no possible excuse for much of the mystery in which this term is shrouded, and more especially so in a community where cause for its existence holds forth so openly in the filth diseases with which it is associated. In such epidemics what suggests itself many times as a positive manifestation of a specific pathology, detailed objective study many times orients as such. The term

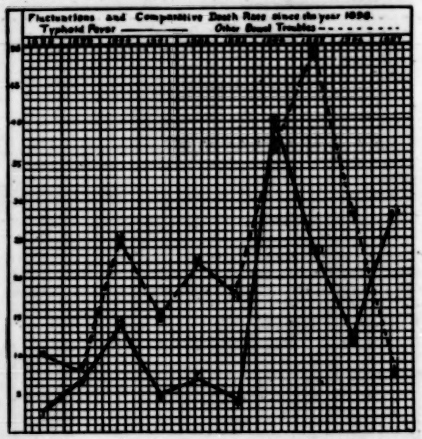


Fig. 3.—Chart showing diagrammatically the interdependence between "winter cholera" ("Other Bowel Troubles" in the chart) and typhoid fever.

in these instances has no definite pathology, and by laboratory methods is shown to have a most varied significance diagnostically, bacteriologically and pathologically.

The examination of body fluids and stools gave interesting data, in spite of the fact that a great deal of effort toward isolating any organism, aside from those mentioned, resulted negatively. The typhoid bacillus and the colon bacillus, as well as other organisms of the colon group, were the bacteriologic offenders. However meager these results may appear, we have reason to associate clearly the activity of other organisms which in the water produce disease and many times are not isolated. That these produce disease in the winter months is not a paradox. The sunlight in the smaller bodies of polluted water is a material factor in self-purification, and in this respect ice as a factor in accentuating germ growth has made itself evident. I believe that more extensive work would perhaps have resolved itself into the finding of the *Bacillus dysenteriæ* or *Bacillus enteritidis sporogenes*, which in themselves or in activity with the putrefactive organisms, such as the proteus and lactic acid group furnish, are normally present in the bowels. Indeed, the bacteriology of winter cholera is the bacteriology of ileocolitis, gastroenteritis and allied conditions.

The unusual symptoms encountered in these epidemics can readily be explained if we recognize the activity of a simple and more especially a mixed infection and its toxemia. The fact that the symptomatology manifested itself more particularly during the winter months undoubtedly aided the advent of the term winter cholera.

I have spoken of this term as being a generic one for many of the common varieties of bowel diseases. It has become popularized and has been so generally adopted by the profession and the public in many communities that the terms dysentery, ileocolitis, gastroenteritis, etc., no longer bear recognition, but are all submerged by the more vague and very inconsistent nomenclature of winter cholera. The term itself gives evidence of the hazardous reasoning that subjective study makes possible in coming face to face with a situation differing from the ordinary. Most absurd diagnoses suggest themselves when the symptoms are somewhat unusual. The zeal that prompted the usage of this term in these epidemics has many times been instrumental in overlooking specific disease, such as typhoid, that study would have unfolded by the demonstration of a secondary and mixed infection. And here I agree with Vaughan that in many epidemics similar to the one described, much that detailed work would establish as typhoid is overlooked simply because the onset of the disease and its acute course perhaps simulates dysentery and true Asiatic cholera. The more cases of typhoid one sees, the more forcibly is the fact impressed that typhoid is not always seen in its classic garb.

PATHOLOGY OF WINTER CHOLERA.

The pathology of winter cholera may be summarized by stating that it is in full accord with the pathology of specific diagnostic conditions that it synonymizes in any given locality, where the profession will persist in using the term. To show the fallacious reasoning and indiscrete usage to which this term has been put, it may be well to mention that the pathology of typhoid has often been revealed postmortem. So, too, the examination of blood and stools has many times proven the presence of typhoid when the picture of collapse, prostration, dysenteric stools and acuteness of disease suggested dysentery.

In the history of disease, such as I have presented, both the conservative and extremist are apt to become obstacles to prophylactic achievement. That individual who does not choose to identify disease, except as it is clothed in the classic symptoms of the text-book, and who is not willing to profit by the results of investigation, because of an inherent skepticism, only too often shields the criminality of insanitation. This, too, as much as his more liberal and idealistic brother, who, in his fervor and zeal, is only too ready to see in a typical manifestation of disease the stepping stone that shall bring him face to face with the grand realization of scientific discovery. Both are instrumental in stimulating false ideas as to the causation of disease which once rooted in the minds of the profession and the pub-

lic, as is the term winter cholera, may be the direct factor in promoting a repetition of epidemics.

The epidemics of winter cholera, in the localities mentioned, have resulted, therefore, in much frantic and useless argument. The strife thus engendered has hampered the endeavor of investigators, because of the wielding of public sentiment in the wrong direction. This argumentation centers itself along a few particular lines. There are those in the profession, I regret to say, who deny the relationship of polluted water to choleriform diarrhea, whether this occurs in summer or winter, in the face of positive proof to the contrary. They support this view, and, in order to be contrary, cling with a superhuman tenacity to the idea that water had nothing to do with it.

Winter cholera in localities in which it has been present, is attributed by this, I am glad to say, small faction to cold weather or influenza. During the period when Escanaba was in the throes of repeated epidemics, and during cold weather, Ford River, a village within a radius of six miles, and Gladstone (Fig. 1), a city of 5,000, within a radius of eight miles, as well as other cities of the northern peninsula, were absolutely free of any form of bowel trouble, except as the inhabitants of those cities visiting in Escanaba would be acutely sick or bedridden after twelve or twenty-four hours' sojourn, with one of the numerous forms of bowel disturbances mentioned.

Although much work remains to be done in order to establish clearly the effect of meteorologic conditions as these affect disease, there is one disease that appears the least intimately connected in such conditions, and that is typhoid fever. Figure 3, which embodies Tables 1 and 2 projected diagrammatically, shows the interdependence of winter cholera and typhoid. These diseases were present and this interdependence existed during the years when influenza failed to manifest itself. There can be no question that in epidemics of bowel disturbances, standing in direct relationship to a polluted water, there can be present at the period of endemic and epidemic influenza isolated cases of this disease. Since there is nothing distinctive, however, in the clinical manifestation of influenza, it seems to me that only criminal negligence would allow the setting aside of all choleriform diarrhea of cold weather, as protean manifestations of influenza. The extreme view, prevalent in localities where winter cholera occurred, that all forms of bowel disturbances prevalent at a particular time are influenza, needs to be discouraged for this reason. Isolated cases of influenza did appear during the epidemic which characterized the winter months of 1907 and 1908. To affirm positively the presence of influenza in all cases, it becomes necessary to prove the presence of Pfeiffer's bacillus.

In the high mortality primarily mentioned and in the active water pollution as proven, should we not expect the relationship of cause and effect? In the light of the demonstration of the mortuary tables as shown, is it even necessary to prove water pollution before the duty of grappling with the implied causal factors should incriminate the profession because of their inactivity? To reason otherwise would imply, in the light of prophylactic martyrdom, a *reductio ad absurdum*. And what holds true of Escanaba holds true of other cities in the United States. The study of isolated epidemics of gastrointestinal disorders, from the historic observation of Austin Flint in 1843 to the present, must exact of us the primal recognition that water pollution and bowel epidemics of divers forms and shapes have an intimate relationship.

There are a few additional facts with reference to the conditions in Escanaba that are well worth mentioning. As the relationship of human offal and sewage, as a diluent of water to be used for domestic purposes, is sufficient cause to inaugurate epidemics of typhoid fever and other bowel disturbances, so, also, there are frequently accessory factors, the liability of which as a cause of disease is attributed many times, unjustly, to the community in which these diseases flourish. It is conceivable, for instance, that the typhoid carrier, as well as those arriving in the city during the period of incubation of typhoid, often jeopardize the lives of its inhabitants and render the community through the statistician a gross injustice through the indiscriminate disposition of their excreta, through the channels just mentioned.

DANGER FROM LUMBER CAMPS.

I have contended and still deplore the inadequacy of sanitation and sanitary inspection in the lumber camps of the great north and northwest. Man's inhumanity to man is exemplified in the inhumane, filthy and insanitary method in vogue of housing this artisan of the north, the plebeian lumber jack, only too often by early environment and lack of training a disease breeder. The thoughtless handling of excreta within the confines of the small area of the average camp ground, the soil of which serves the purpose of drainage and the well constructed on such premises, which becomes the receptacle of surface water, has been the curse of Escanaba and many other cities that are the rendezvous for this exiled brother.

The hospital ticket system in vogue in many parts of the country brings each year, following the return to the camps of these men in the autumn, to the Delta County Hospital (Fig. 2), innumerable typhoid cases, as well as cases of so-called winter cholera, the result of improper hygiene in the lumber camp. Hundreds of stools laden with typhoid bacilli are daily dumped on the shoal within 3,000 feet of the intake (Fig. 2) through which the inhabitants of the city must in turn look for their domestic water supply. Thus isolated epidemics of typhoid have clearly been traced to this source.

While the public water supply in this city has been directly responsible in the main for these recurrent epidemics, the common use of driven wells has in no slight degree aggravated conditions. Escanaba is located on a sandy peninsula. Driven wells, averaging 12 feet in depth, supply about 50 per cent. of the population. When one considers the fact that well-water is contaminated by the soil it falls on, and the soil that it percolates through, the danger of contamination by garbage and other filth is an unavoidable circumstance.

CEMETERY POLLUTION.

Aside from these factors that have made well water in this city a dangerous commodity, two cemeteries within the city limits (Fig. 1) are in position to contaminate all ground water. One's suspicions can but be aroused by these, when, during seasons in which the ground water reaches a high level, the dead are buried in from six inches to a foot of water. Contamination has been proved in most well water examined, and if a public water supply were properly served to the householders of this city, wells in general should at

once be condemned. The pollution of wells is strongly evidenced by the high mortality of typhoid present in this municipality prior to the public water supply. With such a wide range of water pollution, milk pollution must follow as an inevitable circumstance. Although the subject of the milk traffic would bring out a very profitable discussion, time will not allow of its consideration.

LESSONS TO BE LEARNED FROM THESE EVILS.

"It is some compensation for great evils that they enforce great lessons." Such a history as I have presented implies a reticence to do the simple duty requisite in the field of prophylactic medicine. As the mortality from water-borne diseases is excessive, in what we look on as distinctively typhoid centers, so more extensive statistics will show the full scope of the problem that confronts the profession of this country. With the acknowledgment that typhoid and allied troubles are filth diseases, is also established the truth that these are also clearly preventable diseases. These fundamental observations on these diseases may appear trite, but in the exact degree that these appear so do they incriminate those of us who have been entrusted with the grand achievements of our brethren, who have offered their lives in the vanguard of preventive medicine, in order that we might accept the rich legacy of their martyrdom. If we would emulate such labor, no greater field offers itself to the medical profession at large than the eradication of what exists as a blot in many a hamlet and city of our commonwealth.

To this end it is not enough that sanitarians and public health officials wield public opinion. My observation as to the express need in the profession to-day is the activity of men with an enthusiasm and courage born of conviction that truth will ultimately triumph, men who, in the ranks of the general practitioner, will fearlessly express themselves to uphold the honor and dignity that the martyrdom of preventive medicine is worthy of. It is true that in order to possess enthusiasm for this work it is essential that a fund of knowledge along sanitary lines augment effort.

NEED OF STUDY IN SANITARY SCIENCE.

In this respect the necessity of establishing hygiene and sanitary science as a major study in the curriculum of medical schools becomes apparent. Only too often these diseases exist, but because of an apathy that too many in the profession seem willing to foster. I choose to explain this apathy as an apparent ignorance or cowardice, and it is self-evident that there are men in every community derelict in duty in not supporting intelligent and well-directed effort along sanitary lines. It is this lack of "gumption" that has continued to foster folklore and superstition and has held for nothing in the eyes of the multitude the principles that medical science in a Jenner, a Lazear and a Myers has sought to establish. It is true that prophylactic achievement can only be obtained by the sacrifice of selfish interests. Let us clearly recognize our duty, however, and find some comfort in the historic fact that the derision of the multitude has ever been the result of well-directed effort, and that principle will ultimately triumph.

We have reason to believe that a wave of concerted action has been started in this country by men, both in and out of the profession, and indeed,

> From the voiceless lips of the unreplying dead,
> There comes no word; but in the night of death
> Hope sees a star.

The Committee of One Hundred of the American Association for the Advancement of science, as well as the Lake Michigan Water Commission, typify movements, the results of which at this time are perhaps but little appreciated. The "I will" spirit of Chicago has no better exemplification than in the moving spirit of the Lake Michigan Water Commission, as it now exists. Both the Committee of One Hundred and the Lake Michigan Water Commission, one representing a national and the other a sectional movement, in conjunction with the Bureau of Legislation, instituted by the American Medical Association, working hand in hand with the medical advisers of the many homes in this country, will elevate the ideals on sanitation, and thus, by wielding public opinion, carry fit and proper legislation, so necessary, especially as it concerns watersheds and public water supplies. State or national legislation offers the only solution in the eradication of water-borne diseases, and I trust that the day is near when the criminality of dumping sewage into a water used for domestic purposes will be apparent.

CONCLUSIONS.

1. Winter cholera has no specific bacteriologic pathology and is a synonym for the more common forms of bowel disturbances, choleriform in nature, occurring in cold weather.

2. The use of this term, interchangeably with the nomenclature of other gastrointestinal diseases, shows the great need of more exact phraseology, based on correct diagnosis.

3. Meteorologic conditions do not prove to be the exciting cause in these epidemics of winter cholera, but only as the factors instrumental in polluting water or milk are present, do these epidemics occur.

4. Winter cholera, as typified by these choleriform manifestations of diarrhea in cold weather, has no exciting cause in the activity of Pfeiffer's bacillus and does not, therefore, exemplify gastrointestinal influenza.

5. Influenza, with a symptomatology centering itself in the gastrointestinal tract, was present during epidemics of winter cholera, but these isolated cases occurred during epidemic influenza. Diagnosis in these cases is established by proving the presence of the associated micro-organism.

6. To the end of stimulating a greater enthusiasm in demanding intelligent and adequate sanitary reform, instruction in sanitary science should demand a major consideration in the medical curriculum.

7. Legislation controlling the watersheds and preventing contamination of public waters is imperative.

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS. DUTTON AND BREITENBACH.

DR. E. L. MUNSON, Fort Sheridan, Ill.: It seems to me that we can not sufficiently appreciate the important fact that every large group of persons contains one or more typhoid spreaders, and consequently, the potential elements of an epidemic. The relations of the typhoid carrier in civil life are usually confined to a small group, and the results are consequently circumscribed, but the possibilities in the crowded camp of a military organization are almost appalling. In times past we have been too prone to accept, without question, the common idea that the excreta from healthy individuals, though offensive, had no latent power for serious evil. We look carefully after the excreta of the persons who are known to be sick, but we overlook the great responsibility of the spread of disease from the well. Now we do not know as yet what proportion of persons of any given age are harborers

of the disease, or of the typhoid bacillus. I have seen certain studies which would indicate as many as four to the thousand. However that may be, the point is that, out of every large group, some persons are typhoid carriers. Either of these carriers must be identified, isolated and specially cared for, or we shall have to consider and treat the excreta of that great group of the community as infected. The time is coming when we must declare that human excreta, whether from apparently healthy persons or not, are dangerous at all times.

DR. J. H. WHITE, New Orleans: Instead of trying to cleanse its water supplies from typhoid as well as other pollutions, the State of Montana forbids that any of her streams shall be polluted, and says to the cities: "You shall not put any sewage into your streams any longer; you must dispose of it in some other way." Eighteen communities discharged their sewage into the potential water supply of the State of Montana up to recently. Five have been compelled to remove, and in process of law the other thirteen will be compelled to move, so that the water supply will be free from pollution. While it is not possible for all the other states to do that, it is possible to prevent further pollution. In 1893, when on duty in Hamburg, Germany, I went over the question with Dr. Dunbar and another man in Hamburg, who was giving a quarter of a milion dollars toward the investigation and provision of some method of cleaning the small streams of Germany, and making them fit for use. This example is a good one for us, since the Elbe River alone is polluted with sewage from 38,000,000 people.

DR. W. F. DUTTON, Pittsburg, Pa.: The effluent of chemicals can not be filtered from Ohio River water. In Pittsburg the water corrodes the pipes and furnishes a water that is not fit for cooking and drinking purposes. The unfortunate individuals who are forced to use this water are prepared, by the gastroenteric irritation, to become ready victims of typhoid. It is disgraceful that a municipality of such vast wealth should sacrifice yearly, through gross negligence, so many lives. The ways and means adopted by Dr. Munson and Dr. Gorgas in stamping out disease during the Spanish-American war, and recently in our new possessions, are commendable. The municipalities of the Ohio valley should take a few suggestions from these examples and get to work.

DR. O. C. BREITENBACH, Escanaba, Mich.: This question of winter cholera has become a very important one because of atypical manifestations of disease in many of the municipalities of Illinois and Michigan, as well as other communities, throughout the country.

FRESH-AIR TREATMENT IN THE HOME AS APPLIED TO PEDIATRICS.*

ALEXANDER McALISTER.
CAMDEN, N. J.

If fresh-air treatment is demanded, at all hazards, in tuberculous adults, it is three-fold more imperative in children, in whom are the issues of adult life and also of probable death in youth or early adult life when the infantile infection is not detected and removed. Successful treatment of a child saves a member to the family and an adult to the community. Unsuccessful treatment, if not attended by death in early life, only contributes to the rank and file of adults a morbid being to face with increased risks and frightful odds the perils of unfolding adolescence, or, if a female, of the functions of motherhood.

But aside from this saving of life from the ravages of the white plague, the greater power of a redeemed and robust child-life in repelling or combating diseases incidental to subsequent years argues with equal force for vigorous and persistent use of the fresh-air treatment of children. Such treatment should be practically general, since it is indicated in active, latent and suspected tuberculosis; in scrofulosis, in lymphangitis—in fact, in all children of delicate, puny or frail constitution. But children who are not included in the above list, children whose parents are tuberculous, especially the mother, should not be denied these invigorating influences, for otherwise, sooner or later, they are likely to show a marked morbidity or other early signs of the tuberculous infection.

In other terms, there is to-day a great need for a general return to the ancient practice of "hardening children"—one of the arts lost in our modern domestic life. Twenty years' general employment of this fine art, along high scientific lines, in all civilized lands, would go a long way toward placing tuberculosis where it belongs, namely, in the group of diseases attendant on ignorance and heathenism, rather than enlightenment.

Modern medical research has forced on us several fruitful conclusions. The most important of these are:

1. The average duration of tuberculosis is longer than we know.

2. The majority of cases of tuberculosis begin in the earliest years of life.

3. When pulmonary tuberculosis appears in a youth, the point of attack has generally been from the inside—in all likelihood from bacilli that had lain dormant in the lymphatic system a long time.

In the old conception a case of tuberculosis began when the advent of an alien infection ushered in the first crisis in the development of the specific bacillus. We now know that this crisis simply marks the beginning of tissue-destruction, or, accurately speaking, consumption, and incidentally also of the absorption into the system of new and more harmful toxic products.

In the more modern and scientific conception, tuberculosis begins the moment the specific bacillus takes root, so to speak, in the soil of the system and thus begins its parasitic life. The earlier the system can be stimulated to throw off the infection the less the effort required. On the other hand, the more luxuriant the infecting bacillus, the greater the expellant force must be. These facts may be assumed as self-evident and as additional argument in favor of utilizing the fresh-air treatment in infants and children. Since the treatment can work only good and the tuberculous infection only evil for the child, the treatment should be enforced in all instances in which infection may be feared, but can not be positively disproved.

Here is an instance in medical practice in which reasons for suspicion should be diligently sought and a suspicion accorded weight equal to a scientific diagnosis. No race or period of life is wholly exempt from tuberculosis. The specific bacillus has been found in the placenta, thus forcing the conclusion that intra-uterine infection of an infant is quite possible, though perhaps rare, and that by just so far is the old term "inherited" applicable to tuberculosis. According to Holt, tuberculosis has proved fatal at the tender age of twenty days.

The success of the fresh-air treatment in children hinges on the physician's ability to enlist hearty family cooperation. The idea of inheritance still dominates the average mind. It is a pertinent fact that less than average intelligence is required to appreciate the benefits of air and sunshine to a debilitated constitution, while more than average intelligence fails to credit claims for

* Read in the Section on Diseases of Children of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908

like effects on disease. Hence the great importance of forcefully placing all the blame where it belongs—on an subnormal constitution—and of impressing the need for a practically out-of-door life for children.

In this connection certain postmortem findings are of special interest. They show that the tuberculous infection is more frequent during the first year than during the second, and during the second year than during the third. Although these records are still too few for sweeping generalizations, they justify certain conclusions that are evident from other observations, namely, that infants are frightfully exposed to tuberculosis and, what is sadder still, that many succumb, directly or indirectly, to the infection. Perhaps it is to these two facts that we should look for an explanation of the fact that the infant mortality rate continues high while for other ages the rate is decreasing.

Other recent conclusions bearing on the subject and urging on us an outdoor life for children are, first, that in the subnormal infantile system vitality is lacking to throw the infecting bacilli from the glands into the lymph and blood currents to be annihilated; and, second, that during adolescence when the powers are rallying and these bacilli are dislodged they frequently find the lung tissue under tone and here become the germinating seeds of consumption.

Tuberculosis is, above all other diseases, bred in the family, and in a large measure, if not absolutely, controllable by domestic hygiene and curable by the fresh-air treatment. That is a sweeping statement, but it is well supported by facts. For argument's sake we may admit that in our ardor we are only riding to the extreme another therapeutic hobby. No more worthy hobby was ever ridden. In the entire list of therapeutic fads and fallacies of all ages there does not appear one hobby that could be ridden with greater profit. What is curative of tuberculosis is productive of constitutional vigor and prophylactic of practically all diseases.

Every infant enters on life with a certain capital of vitality. Alas, that in many instances this capital is so small and in many more so quickly squandered! The result is early physical bankruptcy, tending to early death or the laying of the deep foundation of diseases—notably tuberculosis.

Children generally respond well to this treatment. In the case of adults it is not always possible to carry out the treatment in the home, owing to the difficulty experienced in laying aside all business cares. Children, on the other hand, are passive and indifferent to surroundings generally. They require little attention apart from intelligent oversight.

The treatment must be conducted under the personal supervision of the family physician. Eternal vigilance and circumspection are demanded here just as in case of typhoid fever. Erroneous conceptions, false and antiquated notions, and gratuitous suggestions from outsiders, are best anticipated and forestalled.

Details of instruction as to treatment can not be laid down here, since they depend on the age and condition of the patient and the general home environments. The diet and strength of digestion demand first attention. An angle of the house, a porch, an awning, an outbuilding or the shady side of the house may be used as a nursery during the daytime. Yet the fact must not be overlooked that any strictly outdoor site may be fully equalled in merit by a nursery or sun-parlor where a limitless supply of dust-free air may be commanded.

It is well to map out for each child a sliding scale of hours to be spent in the open air. This progress should grow into a practically outdoor life. The bedroom must open into the outer air. The folly, if not culpable ignorance, that one meets on every hand relative to the dangers of draughts must be combated with patience and sound arguments.

The cough and fever generally yield first in successful treatment and hence are a valuable index. When these are absent, improved digestion and normal increase in body weight indicate good results of the treatment. Care must be taken to avoid exposure to the direct rays of the summer sun as well as to the sweep of high winter winds.

Finally, much depends on an intelligent appreciation of the fact that fresh-air treatment does not imply simply cold air treatment. "Cold" and "fresh" are not synonymous terms. The air in a cellar may be cold, but it is seldom fresh. Water from an ice-cooler may be cold but is never fresh. On the other hand, water drawn from a deep well may have a uniform temperature of 55 F., but is always fresh. When it stands in a vessel the freshness is lost, though the temperature may fall many degrees. Freshness in water is the sparkle the water brings up from the fountains of the earth. Freshness in air is the sparkle the air draws from the azure depths above us.

Aeronauts tell us that the great envelope of atmospheric air about us is a vast inverted ocean whose placid depths are in the heavens and whose surface is plowed and churned by the revolving earth, to the depth of hundreds of feet, into a mighty wave and billow-tossed surf. Life in this eternally agitated surf is outdoor life. In the fresh-air treatment the patient bathes continually in the surf of the aerial sea.

Then, to use one more analogy, the value of surf-bathing does not lie in the presence of salt or the percentage of salt in the water but in the surging ocean beyond and the impact of water on the body. Likewise the value of the fresh-air treatment is in the impact of the inspired aerial surf—the respiration of free, surging air.

580 Federal Street.

ABSTRACT OF DISCUSSION.

DR. D. E. ENGLISH, Millburn, N. J.: I can endorse everything in Dr. McAllister's paper. In regard to fresh air and cold air, I do not think that it is necessary to have the air very cold. I have observed that in steam-heated rooms, with the windows open on two sides of the room, the thermometer on the wall opposite the windows would sometimes register 20 degrees higher than the temperature out of doors.

DR. C. F. WAHRER, Ft. Madison, Ia.: If we keep these children stirring in the daytime they will probably get all the fresh air they need. The problem is to get plenty of fresh air at night. Among the poor, fresh air is always cold air. By the use of a window tent something may be done in getting the proper quality of air. We must educate out of existence this old superstition that night air is dangerous air. Tuberculosis is a disease of civilization. I live in a city of 11,000 population, a city that is built on the river, so that we are practically in the country air. The consequence is that I do not see one case a year of tuberculosis in children. But it is a problem that must be dealt with in the cities, especially in the crowded districts among the poor. In the winter time the wealthy people can afford to have their rooms warm and the windows open, but in the poorer districts one can not get clean warm air. The only way we can bring about such a

desirable result is to employ the aid of our legislators. When they are willing to spend as much for our children as for rust on potatoes and things of that sort, we may hope for an improved condition of affairs, and not until then.

DR. ARTHUR W. FAIRBANKS, Boston: In considering the problem of tuberculosis in children in the cities we must divide the cases into three classes: First, in well marked, absolutely hopeless cases the patients should be placed in a hospital to protect the community and the family. The second class includes slightly but definitely developed cases of tuberculosis in the initial stage. In these cases the patients can be cured only in a sanitarium. We must have absolute twenty-four-hour control of these children, if we hope to accomplish anything. The family will not carry out our instructions if the patient is in the home, and we can not appeal to the children to do what we require, so to get any result we must have them in a sanitarium. Then there is the third class of cases, the so-called pretuberculous cases, those offering the best soil for the development of tuberculosis. They are so numerous that the state should deal with them. They have to sleep at home, but they should be put into schools out of doors, in the woods. Children in these outdoor schools do well in Germany and in their studies they get along as well as they do in the town schools. We might shorten the vacations and keep them in the schools during the summer, for they are better off in the forest than they would be at home. When they are sleeping at home we should have nurses to visit them and see that they are getting the best air obtainable. But at best the air in the cities is not dust-free or smoke-free.

DR. JOHN M. BEFFEL, Milwaukee: In considering this problem of the treatment of tuberculosis in children, it should be announced that the time to cure tuberculosis is before the patient gets it. It takes a child of a certain potentiality to live in this world. The fact that those who die of tuberculosis die at the average age of 35 years shows that tuberculosis is not a disease of childhood, but that if they contract it in childhood they retain the organisms in the body until they are mature. So, the first thing to do in the treatment of the condition is to prevent the development of tuberculosis. The child of a tuberculous mother should not be put to the mother's breast. As our homes are constructed to-day, it is practically impossible to get fresh air in the home without subjecting the child to the possibility of developing some other disease condition. In a tuberculosis sanitarium we have a sleeping-room and a dressing-room, but in our modern houses the bedroom is the sleeping-room and dressing-room. If the child is to sleep in a cold room, then the mother must get up in that cold room and dress in it. She naturally hesitates to dress her child in such a cold room. If our houses were so constructed that the child and mother could dress and undress in a warm room and sleep in a cold room, it would subserve the interest of these children. Twenty-four hours of fresh air every day is the only cure. It was Vaughn who said that one should breathe fresh air twenty-four hours a day and that the only air one can breathe at night is night air. The night air is not the worst air in the world. In our great cities the night air is the best air in the twenty-four hours. It has been cleared by the sun and there is no longer so much dust and dirt in it, so that it is in better condition to breathe than at any other time. In the treatment of tuberculosis in the home many children succumb for want of nourishing food. There are two essentials to the treatment of tuberculosis; one is an abundance of fresh air, and the other is plenty of nourishing food. The Indian succumbs to the disease as soon as he is infected with it because he is a poorly nourished individual. Statistics have shown that children from 5 to 10 years are not as subject to the disease as they are at a later age. During the first five years the child is in the home; from 5 to 10 he is much in the fresh air, going to and from school. After the age of 10 years he begins to crowd to get through school. He eats a hurried breakfast, perhaps before the rest of the family are ready for it; he hurries to the schoolhouse and at noon hurries home to dinner. He eats hurriedly and rushes back to school again. He hurries home in the evening and prepares his lessons for the next day. It is no wonder that at 15 years of age tuberculosis increases at such a striking rate. The period when we should begin the fight against tuberculosis is during the first ten years of the child's life, giving plenty of nourishing food, plenty of fresh air and thus building up the power of resistance.

DR. T. G. ALLEN, Chicago: In the treatment of tuberculosis—and this applies especially to fresh air—personal observation and absolute control of the individual through the nurse is necessary, as someone has already said, for the family will not give the patient the necessary fresh air throughout the twenty-four hours without such supervision on the part of the nurse. There are many children spending five or six hours a day in school who ought not to be in school, but out of doors instead, in order to get the twenty-four hours of fresh air. Architecture is of importance and worthy of consideration, but since we are powerless to do anything in that direction, the next best thing is to hammer away at this idea of fresh air twenty-four hours a day; and we should see that children are kept in the open air, not simply tell the mother to keep them in it. Not only should we take the children out of school, if we have any suspicion of tuberculosis, but if a child is below par in any way, we should not send him to school at all until he is 8 or 9 years old and has some of that physique which only an outdoor life can give.

THE MENOPAUSE.*

DANIEL H. CRAIG, M.D.
BOSTON, MASS.

In this paper no attempt has been made to summarize the heretofore expressed views of others, nor to refute or corroborate statistics, but merely to express personal views obtained from personal observation.

The term menopause may signify widely different ideas, not only to doctor and patient, but to different doctors and even more to different women. Every medical man realizes that the period during which the menopause is in process of establishment is a trying one to every woman. It comes at a time when she is inclined to the development of malignant growths and degenerations, and when various and extremely troublesome nervous phenomena have come to be expected. To the less well informed this conjunction has from time immemorial furnished a most convenient scapegoat, and it is still a common experience of every gynecologist to have women come to him seeking relief from symptoms attributed by some nonplussed general practitioner to the "impending" or "beginning" menopause, wherein the most careful and painstaking anamnesis and physical examination fail to reveal the slightest evidence of such "impending" or "beginning" menopause, but wherein that same careful investigation succeeds in revealing a very evident but quite different cause for the symptoms. Those who thus attribute all sort of independent ailments to a problematical menopause seem to believe that in thus classing them they have done all that is necessary, as they practically invariably leave matters to time to remedy, thus coupling inefficiency in diagnosis to inefficiency of therapeusis.

To the woman the significance of the menopause varies as her personality. Many women, having had relatives or acquaintances afflicted with malignant disease at this epoch, look forward to its approach with actual dread, thus greatly heightening the natural tendency to nervous symptoms. Others dread it because they have seen some case in which every nervous manifestation arising for ten years was attributed to the

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

menopause, and such women begin in their early thirties to get nervous over the dread of it, thus inducing quite independently of any actual menopause the very symptoms which they fear as its concomitant.

Another class of women dread it from a domestic standpoint, apprehending that at its inception they will grow old, unattractive and sexually incompetent, and so endanger domestic felicity. I have noted this fear quite as frequently in women younger than their husbands as in those older.

Yet another class look forward to the menopause as a savior, having been led to anticipate that the consummation of the menopause is to cure them of fibroids, cystocele, lacerations and, in fact, of about every form of pelvic ailment. And, painful as it seems, these hopes are only too often based on the promises of trusted doctors. Because these spontaneous recoveries occur on infrequent occasions should furnish no license to physicians to withhold proper treatment for years in the elusive hope that any given individual woman is to constitute the happy exception. For, as a matter of fact, she is much more liable, according to my observation, to develop a sarcomatous degeneration of her fibroids than to experience their spontaneous atrophy, and while marked vaginal atrophy is frequently observed after the menopause, it is almost invariably in those women who have never sustained any, or at most slight, vaginal injury or who have had such injuries properly repaired years before.

A final class of women hail the advent of the menopause with welcome. To them it means freedom from the duties of maternity, and they actually look forward to it as the beginning of a really care-free existence, but my experience leads me to believe that these are usually comparatively healthy women.

Out of respect to the supposed education of the medical profession, and in the assumption that the days of the employment of the menopause as a scapegoat are at an end, I will urge what follows as an outline for their use in the needed education of our women. I am absolutely convinced that, aside from a few benign nervous symptoms quite amenable to treatment, the normal menopause in a healthy woman is purely physiologic, and that any pelvic or exaggerated nervous manifestations arising at that time are dependent on a definite pathology as absolutely as at any other period of her existence and demand the same prompt and efficient treatment.

The normal menopause in a healthy woman becomes established in one of three ways. 1. The periods become less and less in amount until the vanishing point is reached. 2. The periods become more and more widely separated and disappear. 3. Menstruation goes on without any appreciable change until, after a perfectly normal and usual period, it fails to reappear. Needless to say, the first two methods may be blended.

Perhaps it may seem that my dogmatic statement that the normal menopause in a healthy woman carries no protean symptomatology demands elaboration. My method of determining these facts has been careful and has covered a period of sixteen years. From 1892 to 1900, while doing gynecologic work as my specialty, I also did general practice, and during nearly all of this time I used all possible material in which pelvic disease was not a factor to determine the true nature of the uncomplicated menopause, and I have continued this study up to the present in all suitable cases. My study of those cases in which the existence of the menopause in process of establishment has been an etiologic factor has produced some most interesting results.

A careful analysis of the subjective symptoms will practically furnish a diagnosis as to just what portion of the pelvic organs is pathologic, which deduction can almost invariably be proved correct by physical examination. When the symptoms are manifested as erratic nervous action, including the various phases of what Courtney terms psychasthenia, comprising emotional, melancholic and various other "nervous" lesions, including excessive "hot flushes," the ovaries may be confidently considered the point of origin of the trouble, and physical examination will almost invariably reveal some perfectly readily demonstrable lesion in one or both. In case no lesion can be demonstrated, so certain have I been in two cases that the ovaries were pathologic that I have unhesitatingly advised operation, although no abnormality could be made out by physical examination. In one of these cases operation was declined and the patient lost to sight, but in the other case operation was accepted. The ovaries were found normally situated and showed only evidence of beginning atrophy, being otherwise macroscopically normal, but on microscopic examination they both showed interstitial overgrowth of fibrous tissue producing cirrhotic changes, evidently of duration considerably beyond the duration of the menopause, although symptoms had not been present. Rarely, cases of ovarian abnormality may manifest themselves in localized pain without excessive nervous symptoms, but this is very uncommon. Such pain, unless it long antedates the menopause, if present at all, is seen in connection with the above mentioned nervous symptoms.

Lesions of the body of the uterus, metritis, endometritis, growths and malpositions have practically always given rise to irregularities in the flow. Usually the flow is erratic as to time and increased in amount. The one instance in which hemorrhagic symptoms are seen and the body of the uterus may not be at fault is in cases of beginning malignancy of the cervix.

Too long women have been consoled with the idea that normally a "dodging period" must be borne. Normally there is no such occurrence as a "dodging period." If any approximation to what has been so characterized occurs it is in itself an evidence of pathologic conditions.

Lesions of the cervix, with the exception of malignant growths, as above noted, give rise to local and referred pain and leucorrhea with minimal nervous complications. The pains of such cervical origin are usually deep in the pelvis, referred to the sacral region or to the region of one or both groins. Of course, these different localities may be pathologic in different degrees, and in association with each other, so that so simple a symptom complex as the foregoing suggests is rarely seen, but when carefully analyzed I am certain that you will all agree that my deductions have been correct.

One final point I wish particularly to emphasize. All these conditions antedating or accompanying the establishment of the menopause give rise to as acute suffering as at any previous time in the woman's life, and if they antedate the menopause the discomfort and disability often become greatly aggravated. As a matter of fact, many lesions first become troublesome at this time, the woman having had sufficient vitality and power of resistance to successfully nullify such lesions up to this time. Therefore, the doctor who prescribes a placebo, mutters a few platitudes about its being the "inevitable course of nature" and advises the woman to

bear up and time will work her cure is failing utterly in his province. My experience has taught me that these cases are amenable to exactly the same treatment as is appropriate at other periods of the woman's life. When less radical methods fail, as before said, I unhesitatingly operate, with even better results than either earlier or later, as in so doing one is working *pari passu* with Nature, and her aid is not to be despised. The sudden completion of an already begun menopause has given rise to no unfavorable symptoms and has avoided a vast amount of suffering and probably some cases of malignant disease.

While on the subject of the suddenly induced menopause, I wish to mention one case which has come under my own unusually close observation. Of course, we do not now hear very much of the vapid twaddle which was at one time so prevalent anent the gruesome effects of oöphorectomy in young women, but we still have more than should be heard, since the need for it, namely, needless oöphorectomies, has also practically ceased. When the suddenly induced menopause has been accompanied by sexual loss, by nervous breakdown and other similar discomforts, it has invariably been in cases in which the lesions for which the operation was done were either very severe or of so long standing, or both, that the symptoms ascribed to the sudden loss of the ovaries were really symptoms of the original disease which the operation could not correct. This deduction would be worthless, except for the corroborative evidence of cases in which prompt operation has given complete relief with entire absence of all those *bêtes noires* of which we at one time heard so much. It was one such case which I wished briefly to outline.

A woman who was herself and whose husband was a close personal friend was operated on at her third severe attack of acute appendicitis, having been taken ill while away from home. The appendix had perforated, and the surrounding peritoneal cavity was a mass of old and recent adhesions. I am stating these facts from my own observation, as I arrived just in time to witness the operation. The pelvis had not become much involved in the present attack, although both tubes and both ovaries were imprisoned by unusually firm old organized adhesions, souvenirs of her previous attacks. The operator considered it advisable to remove both tubes and both ovaries, notwithstanding there had never been a single pelvic or menstrual symptom, and did so. Recovery was good. There were no nervous phenomena beyond occasional "hot flushes" and moliminal headaches, all of which ceased after a few months. She did not put on fat nor do any of the other baleful things so often predicted by those who did not operate. And such predictions were very common at that time, twelve years ago. The menopause was absolute, and yet to this day sexual desire is as keen as ever and orgasm is as complete as ever. Her sexual, nervous, and in fact her entire physical life was in no way changed by the suddenly induced menopause. These facts I was situated to know fully.

One swallow does not make a summer, but here is a case in which the woman's pelvic organs, circulation and nerve supply were not exhausted by a long-drawn-out inflammatory process in which the sudden establishment of the menopause certainly fulfilled the highest ideal function of preventive medicine without causing any of the much paraded symptoms which were at one time so seriously feared, and, in my estimation, it is only an index of what has occurred in many cases and what may always be confidently expected of prompt, efficient similar operations.

The Popular Education Committee of the A. M. A., on which Professor Clark has charge of the work regarding uterine cancer, should incorporate in its work the education of the general practitioner, and much more widely, of course, of the women themselves on the facts briefly outlined regarding the menopause. Women should be taught that much that they have heard about the menopause is past history and obsolete, and made to realize the wisdom of applying to their medical advisers at this period as they would at any other. Such an education would not only save an inestimable amount of suffering, but would enable many cases of malignant disease to be properly treated before reaching an inoperable degree of advancement. In the vast majority of all cases of inoperable carcinoma of the uterus the vaiuable, or rather invaluable, time has been squandered in attributing their symptoms to the "dodging period," and even their pain has been considered the inevitable concomitant of the normal menopause. And the fact which touches us most deeply is that in this belief, in this waste of invaluable time, in this loss of their one chance of life, they are only too often acting under the advice or at least approbation of an optimistic doctor.

SUMMARY.

To epitomize my ideas, then, I should say there are three normal types of the menopause, sometimes seen more or less in combination one with another; departures from these normal types are easily recognized; the symptomatology alone will very often point to the organ or region at fault, but such deduction should always be given physical confirmation; lesions at this time are as deserving of and amenable to treatment as at any other time; neglect of such treatment engenders inestimable, unnecessary suffering and is one of the greatest factors in causing so many malignant uterine growths to attain an inoperable state of advancement; failure to properly diagnose and treat such cases will inevitably bring opprobrium on our profession as a whole.

386 Commonwealth Avenue.

Clinical Notes

PIN IMBEDDED IN VEIN FOR FOUR YEARS.

H. LAMONT YOUTZ, A.M., M.D.
MOLINE, ILL.

The much mooted question of whether small pointed objects, such as needles and pins, migrate in the human body may be made only more obscure by the following details of a case recently seen by me. It has, however, some points of interest.

History.—About two years ago the patient, a married woman, aged 37, called my attention to a small hard substance in the flesh of her right fore-arm, which had been present then about two years. The mass could be readily palpated, being apparently just beneath the skin, as a long slender object, slightly movable. If grasped with the ends between the thumb and finger, pressure produced much pain. Otherwise no unusual tenderness was noted. The patient stated that some months before a doctor had examined the arm with the *x*-ray, and told her there was a needle imbedded there. The presence of the mass had caused her no discomfort and interested her only as a curiosity. A few days ago she appeared at my office

and complained that the "needle in her arm" was bothering her, causing the arm to ache and feel numb.

Examination.—Examination showed no signs of inflammation at the site of the "needle," though the mass was plainly palpable. Examination under the *x*-ray disclosed what was apparently a genuine needle at the point under inspection, about 9 cm. (3½ in.) below the inner condyle. At a point 6 cm. (2½ in.) distal to this was a second object of a similar appearance. The presence of this had never been noticed by the patient.

Treatment.—Under cocain anesthesia, incisions were made over the two sites. Just beneath the skin in each case a dark object was plainly visible. Each seemed to be imbedded in a cord-like process. The lower end of the "needle" nearer the elbow was quite clearly defined, though the "cord" continued beyond the end of the incision. The upper end merged into metallic granular material—still in the cord—the latter continuing definitely beyond the extent of the contents. Cutting of the "cord" at each end of the "needle" with its granular accompaniment was followed by no fresh bleeding. When, however, the "cord" was cut at the distal end of the lower fragment, a vigorous and steady gush of blood, characteristic of a severed vein, surprised me. This occurred after I had freed the upper end of this fragment of "needle" and had dissected up the "cord" to an extent sufficient to give me at least 1 cm. (⅜ in.) of the free end of the spouting vein.

I am convinced that the distal fragment lay in and occluded the vein. From the similarity of its situation in a cord-like process it is probable the proximal fragment also lay in the obliterated vein.

The patient is ordinarily intelligent and not hysterical. She had no recollection of any local injury from a pin or needle. She stated that as a girl she frequently carried pins and needles in her mouth and even carried them so to bed. She remembers nothing of having swallowed any at any time. The upper fragment was noticed first about four years ago. The lower fragment measured about 1.5 cm. (½ in.), the upper 2.5 cm. (1 in.) in length. Both were much corroded. The granular fragments referred to are unquestionably products of the corrosion. One end of the lower fragment has a very small head, indicating that originally the object might have been a small-headed pin about 4 cm. (1½ in.) in length. The "small head," however, was of questionable identity—so small that it might have been the large end of a needle, corroded.

Is it probable that the pin could have migrated for some distance within the vein? I believe the object did migrate in the vein—against the blood current. Later questioning of the patient revealed the fact that during the week preceding the removal of the "pin" her hand swelled very badly—so much so that her rings became painfully tight and were removed with difficulty.

A PROBABLE CUTANEOUS ANTITOXIN REACTION.

A. A. ROBINSON, M.D.
OGDEN, UTAH.

The following peculiar phenomenon was observed in a case of diphtheria in which an immunizing dose of antitoxin had been given twenty months before the attack:

History.—J. T., male, aged 15, was exposed to diphtheria Nov. 6, 1906, and received a prophylactic dose of antitoxin. He escaped the disease at this time, but his brother died of it. Aug. 26, 1908, he contracted pharyngeal diphtheria and one day later I was called.

Examination.—On exposing the back to administer antitoxin there was noticed between the scapulæ, an urticarial spot about 5 cm. long and 3 cm. wide (2 in. by 1¼ in.), narrower at the lower border. The skin over this area had a blanched appearance. The margins were irregular and well outlined, but not elevated, and the surrounding skin appeared perfectly normal. This gave rise to no itching or hyperesthesia; in fact, the patient knew nothing of its existence, but it was not there three days before. There were no other lesions of the skin to be found. On inquiry I learned that it was at this spot the prophylactic dose of antitoxin had been injected twenty months previously. The spot disappeared about four hours after treatment was instituted. The disease yielded in a remarkable manner to serum therapy.

Whether this is a specific reaction of the skin and subcutaneous tissue which have been supersaturated with antitoxin, to a diphtheritic infection following some time later, I am not prepared to say. The remarkable coincidence in site, the outline corresponding so closely with that produced by an injection, together with the rapid disappearance of the spot after administration of antitoxin, have caused me to be of a *post hoc propter hoc* mind in this case.

It will be interesting to know if such a phenomenon has been observed in similar cases.

TWO ADDITIONAL CASES OF MALIGNANT ENDOCARDITIS TREATED WITH COLLOIDAL SILVER; DEATH RESULTING.

S. SOLIS COHEN, M.D.
PHILADELPHIA.

Since publishing my record of six cases of malignant endocarditis treated with colloidal silver, with two recoveries, I have had the opportunity of treating two additional cases of this disease with persistent and sufficient doses of the same drug, but in both instances death has occurred.

I have felt it my duty to put on record this experience—which reduces my percentage of recoveries under this method from 33 to 25. However, as the use of colloidal silver "does no harm" in any instance, and has apparently done good in some instances, and as we have as yet no specific—even among biologic products—against an unidentified infection, I find it in accordance with the Hippocratic principle to continue to use the drug—in conjunction with other indicated measures—until something more promising is offered, or until I become convinced of its uselessness.

1525 Walnut Street.

Italian Olive Oil.—According to Consul James E. Dunning, the action of the Italian government in making inspections and analyses of the olive oil offered for export is having the effect of securing a high standard for olive oil. The partial failures in the olive crop in certain years have induced the importation into Italy from the United States of large amounts of cotton-seed oil to supply the deficiency. The Italian government is trying to obviate this by taking means to improve the olive crop. The report continues: The attitude of the Italian government toward the whole matter probably means that eventually there will be a considerable falling off in the amount of American cotton-seed oil imported into Italy to make up for short crops here, while it appears to the consulate to sustain absolutely the contention of this office that adulteration is practically unknown in Italian export oil. Most of the adulteration which is under official consideration takes place in Italy, it is believed, by mixing cotton and other oils with the native oil. It is safe to say, however, that the Italian olive oil shipped to the United States is pure. At all events, it is now the intention to fix that purity by means of an official standard.

A NEW INSTRUMENT FOR THE RAPID AND ACCURATE ESTIMATION OF ALBUMIN IN THE URINE.

HENRY R. HARROWER, M.D.
CHICAGO.

The albuminometer consists of a clear glass tube similar in shape to the accompanying illustration and so arranged that the bulb at the lower end contains slightly less than 5 c.c. The 5 c.c. mark R is accurately made on the narrow portion of the tube, which from this point is graduated in tenths of a c.c. for 3 c.c. The end is made large to permit of easy filling.

The tube is filled to the mark R with 5 c.c. with Goodman's reagent.[1] Having previously diluted the speci-

New albuminometer for use with Goodman's reagent. About one-third actual size.

men (one in ten is, perhaps, best), the dilution is added drop by drop, shaking between each addition, until a faint white cloud appears. The reaction is now complete and the amount of diluted urine added is read off on the scale. This corresponds to the amount of diluted urine that contains one-tenth of a milligramme of albumin. The amount in 100 c.c. or in a 24-hour specimen may then be easily ascertained. The accompanying table will save some calculation.

SHOWING AMOUNT OF ALBUMIN IN URINES OF DIFFERENT DILUTIONS.

C.C. of Urine Producing Reaction	Grams of Albumin per 100 cc. Urine				
	Dil. 1 in 10	1 in 5	1 in 3	1 in 2	Undil.
2.0	.08	.100	.166	.25	.5
1.9	.052	.105	.175	.263	.52
1.8	.055	.110	.183	.275	.55
1.7	.0588	.117	.196	.294	.58
1.6	.0625	.125	.208	.312	.62
1.5	.066	.132	.22	.33	.66
1.4	.0714	.142	.238	.357	.71
1.3	.0769	.153	.256	.384	.76
1.2	.083	.166	.276	.415	.83
1.1	.09	.18	.3	.45	.9
1.0	.10	.20	.33	.50	1.0
.9	.11	.22	.367	.55	1.1
.8	.125	.25	.416	.62	1.25
.7	.14	.28	.473	.71	1.42
.6	.166	.33	.56	.83	1.66
.5	.2	.4	.66	1.00	2.00
.4	.25	.50	.83	1.25	2.5
.3	.33	.66	1.1	1.66	3.33
.2	.5	1.00	1.61	2.5	5.00
.1	1.00	2.00	1.33	5.00	10 00

The method has the following advantages:

1. The time required to perform the test is reduced to a minimum—a few minutes at the most.

2. Greater accuracy than with any other quantitative method.

3. Very small amounts of urine are necessary for the test, facilitating the estimation of albumin in experimental physiology, etc.

4. Simplicity—no centrifuge or other apparatus required.

2806 Paulina Street.

1. Described by Dr. E. H. Goodman and Susanne Stern in THE JOURNAL A. M. A., July 4, 1908, xxxvii. The reagent consists of the following:

Phosphotungstic acid	1.5 gm.
Hydrochloric acid (conc.)	5 c.c.
Alcohol 95 per cent., q. s. ad	100 c.c.

Therapeutics

SCOPOLAMIN.

Scopolamin (hyoscin) is an alkaloid occurring in hyoscyamus together with hyoscyamin and hyoscipicrin, but in its manufacture is mostly obtained from other sources. It is closely allied to atropin, both in its chemical constituency and in its physiologic action.

The official preparation is *Scopolaminæ hydrobromidum*, which occurs as transparent, colorless, crystals of a bitter, disagreeable taste, soluble in alcohol, and very soluble in water. The beginning hypodermatic dose is .0003 gram (1/200 grain).

The official *Hyoscinæ hydrobromidum* is identical chemically and physiologically with the scopolamin hydrobromid.

Scopolamin (hyoscin) acts locally similarly to atropin, viz., it dulls and numbs the peripheral terminations of nerves, whether in the eroded skin or in mucous membranes, causes dryness of the throat, benumbing of the tongue, and a diminished secretion of saliva. It dilates the pupil more quickly than atropin, but the dilation does not last so long.

After absorption its action ordinarily is quite different from that of atropin both on the nervous system and on the circulatory system. Although there may be a slight period of cerebral excitement, the effect is generally hypnotic. This is especially marked when it is administered hypodermatically, a dose of 1/100 of a grain usually putting a patient to sleep in a few minutes. Occasionally scopolamin causes cerebral excitation similar to that caused by atropin, and perhaps even more active. Such patients show an idiosyncrasy against this drug, and as it is not of infrequent occurrence, should always be suspected until the patient's behavior under the drug has become known. A dose of 1/100 of a grain may cause wild excitement and delirium which may last for some time unless inhibited by a hypodermatic injection of morphin, or the administration of bromids or chloral. During such excitation the pupils are dilated, the throat dry, the face flushed, and the heart rapid.

Unlike atropin, which is a stimulant to the heart and a contractor of the blood vessels, scopolamin generally has but little such effect, and even an ordinary hypodermatic dose, 1/200 or 1/100 of a grain, may cause some cardiac and circulatory depression. In fact, when there is cardiac weakness scopolamin should not be administered. This unpleasant debilitating action on the heart is sometimes noticed when this drug is administered in delirium tremens; consequently, it should not be administered to any patient unless the circulation is at least fairly good and the patient can be at rest in bed. In other words, it is inadvisable to administer scopolamin to a delirious patient, when that patient must subsequently be moved to a hospital or to his home.

On account of the occasional undesirable stimulation of the brain by scopolamin and the frequent profound depression of the circulation that it can cause, the beginning dose to any patient whose tolerance is not known should be 1/200 of a grain hypodermatically. To repeat, it should be thoroughly understood that the action on the circulation clinically is never that of atropin. In other words, atropin may be administered in shock; scopolamin may cause shock.

The sleep from this drug lasts six or seven hours, and may be intensified or prolonged by the coincident administration of morphin. A combined injection of 1/200 of

a grain of scopolamin (hyoscin) hydrobromid and 1/8 of a grain of morphin sulphate will generally cause prolonged and satisfactory sleep. Such a combination in emergencies is perhaps better than a larger dose of scopolamin, but, of course, if scopolamin is to be repeated for a time the morphin should not be given in combination, lest a habit be formed. On awakening from a scopolamin sleep there is often slight circulatory weakness. This signifies that the drug generally should not be administered to a patient as a hypnotic if that patient must arise in the morning and attend to active business. As a hypnotic it should be reserved for the sleeplessness occurring in acute conditions. It is often a satisfactory drug to use in delirium tremens and in the meningitis of pneumonia and typhoid fever. It must not be forgotten, however, that a larger dose may be required when there is active delirium, and such a dose may be followed by circulatory depression. The drug is often of great value in the sleeplessness of insanity, whatever the type. If for any reason scopolamin is given continuously for a time the patient acquires a tolerance and needs a larger dose than at first to cause sleep.

Although a combination of morphin and scopolamin is now often used as a prelude to ether and chloroform anesthesia, it seems inadvisable to give these drugs that cause depressant action on the respiratory center so that the anesthetist can not decide whether respiratory or cardiac failure is due to the previously given drugs or to the anesthetic. If he thinks that the anesthetic is causing the depression he may allow the patient to come sufficiently out of the influence of the anesthetic to permit shock to occur from reflex nerve pain. Morphin and scopolamin are now often administered in sufficient doses to produce anesthesia for operations or for a painless parturition without the subsequent aid of an anesthetic. While such use at times may be advisable and perhaps may be the best method of producing a loss of nerve sensation, it would be unwise to consider it universally correct or advisable.

The best method of administering scopolamin (hyoscin) is hypodermatically, but it is often advisable to give it for solution in the mouth or in a teaspoonful of water, and for this purpose the ordinary hypodermic tablet is the most satisfactory. The dose thus given by the mouth should not be larger than the hypodermatic dose, viz., 1/200 of a grain.

Scopolamin has been used as a nerve and muscle sedative in paralysis agitans. The beginning dose for this purpose is small, 0.00015 to 0.0002 gram (1/400 to 1/300 grain) two or three times a day. The patient rapidly becomes tolerant to the drug and requires an increase in the dose. It is therefore best, if possible, to use the drug only at such specific times as it may be necessary to quiet the hand tremor that the patient may write his signature. In such small doses, and on account of the tolerance he soon develops, the drug does not exert its hypnotic influence. It may be ordered for this purpose as follows:

℞.	gm. or c.c.	
Scopolaminæ hydrobromidi	.003 or	gr. 1/25
Aquæ menthæ piperitæ.....	100	f℥iii

M. et Sig.: A teaspoonful two or three times a day, as directed.

VALUE OF SWEATING IN THE TREATMENT OF INTERNAL AFFECTIONS OF THE EYE.

Dr. Howard F. Hansell, Philadelphia, in the *Pennsylvania Medical Journal*, August, 1908, describes his method of causing diaphoresis in serious eye affections. It seems true that sweating is not resorted to with sufficient frequency in edemas, congestions, and inflamations of the eye. Such treatment is deemed useful and advisable by many oculists, and Dr. Hansell well points out its advantages.

The methods most used to cause diaphoresis are by the administration of jaborandi (pilocarpin) and by dry heat. Owing to the fact that jaborandi occasionally produces considerable weakness, Hansell has abandoned its use, and now causes sweating by first covering the mattress of the bed on which the patient is to lie with a rubber sheet. The patient is then enveloped in three thick blankets. "On each side, extending from the feet to the shoulders, and as close to the skin as the heat will permit are placed receptacles filled with hot water." The patient is then given a cup of hot fluid, preferably tea.

The sweating should begin very quickly, and should continue, provided the hot water applications are kept up. If a glass of ice water is given a half hour after the sweating has commenced, the sweat glands are stimulated to increase their work. All during the sweating process the head should be either wrapped with a wet towel or an ice cap should be applied. Hansell makes the outside limit of this sweating process an hour and a half. Of course the duration of the sweating could be limited, if at any time there was faintness or prostration. After the sweating the body should be dried and rubbed with alcohol and the patient removed to a dry, warmed bed and allowed to remain there for several hours.

It is preferable that this sweating process should be accomplished in the afternoon, the patient remaining in bed until the following morning. The number and frequency of the sweatings depend on the severity and chronicity of the disease and on the physical condition of the patient. The reaction of the patient to the treatment and the effect on the eye inflammation, for which it is instituted, will determine the frequency of the sweatings and the length of time each should be allowed to continue.

At the conclusion of the sweat bath the patient's temperature may have risen to 102 or 103° F., and the pulse is accelerated, but in healthy reaction the temperature should have returned to normal two or three hours later. If the reaction is such as to produce a subnormal temperature, the duration of the sweat should be shortened, and should perhaps be preceded by the hypodermatic administration of strychnin or other stimulant. If the temperature remains high longer than two or three hours the sweat baths should not be continued.

Dr. George de Schweinitz, Philadelphia, in discussing this treatment, believes that in spite of the disadvantages of jaborandi, in some cases no other kind of sweat will do as much good to the local eye condition as will this drug.

The advantages of these sweatings seem to be due to the stimulation and increased activity of the lymphatic system, and this absorbent activity of the lymph, and possibly blood vessel systems, tends to clear up or relieve exudates and inflammations of the eye.

The special indications for the use of these sweatings are "inflammation of the sclero-cornea, of the uveal coat, acute and chronic, of the chorio-retina, and of the optic nerve." While this diaphoretic treatment is not always successful, Hansell has never known it to do harm. It

is of greatest value in chronic inflammations associated with exudates into the different parts of the eye. Of course when atrophy or connective tissue change has taken place in any part of the eye, sweatings could do no good, but Hansell says that it can not always be decided positively from the ophthalmoscopic findings that an exudate has given place to connective tissue, and for this reason it is many times wise to try the efficiency of diaphoresis.

Of course such treatment does not preclude the coincident administration of salicylates when rheumatism is the cause of the eye inflammation, or of mercury or iodids when syphilis is the cause of the trouble.

Hansell also believes, as do others whom he quotes, that diaphoresis, perhaps best with pilocarpin (jaborandi) should be tried in opacities of the vitreous, and in alcohol and tobacco amblyopia, of course after the withdrawal of these causative agents. Patients suffering with loss of sight due to alcohol or tobacco should also, of course, be given strychnin.

PRURITUS OF THE PERINEAL REGION.

All sorts and kinds of applications, solutions, oils and fats, antiseptics, irritants and sedatives have been used for pruritus of the anal, scrotal and vulvar regions. In many patients only temporary relief is offered by any of these various treatments. Blistering and even escharotic action has been caused, and still with a subsequent return of the disease. The cause seems to be due to an irritating secretion, and the itching caused by this secretion compels scratching, which produces an eczema and even dermatitis.

The most successful treatment thus far offered is that by the *x*-ray, several applications of which for an average of ten minutes at a time, even to the point of causing mild dermatitis, afford prolonged and sometimes permanent relief. If the condition again recurs, one or two applications of the *x*-ray again relieves it, and for a still longer period. The suffering of such patients and the satisfaction at the relief afforded can not be understood except by those who have long been troubled by this condition.

Kromayer (*Deutsche Med. Wochenschrift*, Jan. 9, 1908), reports that he has successfully treated 160 patients by the local application of a 15 per cent. solution of caustic potash. This solution, of course, cauterizes the whole surface to which it is applied, and after the inflammation has subsided will undoubtedly cause temporary improvement, but he also advocates the *x*-ray treatment.

WARTS.

Dr. M. B. Hutchins, Atlanta, Ga., recommends the following as a successful treatment of these troublesome affairs:

He first shaves warts on the fingers and hands down almost to the bleeding point. He then applies "a little heap of salicylic acid" to the base of the wart and covers it tightly with a piece of adhesive plaster, renewing this application daily. The remnant of wart is soon removable. This method he says is painless and leaves no scar.

Old and hard warts alongside and under the edge of the finger nail he finds yield best to high frequency sparks or to pyrogallic acid powder applied as above and sealed on with adhesive plaster.

The soft warts of the face and eyelids he finds yield most perfectly to mild negative electrolysis.

New and Nonofficial Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NONOFFICIAL REMEDIES." THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(A list of all accepted articles is published on an advertising page of THE JOURNAL *in the first issue of each month.)*

(Continued from Vol. LI, page 1337.)

PANASE.—Panase is a combination of the digestive enzymes of the pancreas derived from the pancreatic gland of the pig.

It is prepared by macerating the gland and extracting the enzymes together with a small amount of the proteid matter of the gland.

Panase is a light, yellowish white powder, having a slight odor and somewhat mucilaginous taste. It is not entirely soluble in water or glycerin owing to the small amount of protein present. Filtration of its solution, however, does not impair its digestive activity.

It is incompatible with strong alcohol, acids, alkalies, and other substances which destroy the activity of ferments.

Panase should possess the diastasic, proteolytic, milk curdling, and fat splitting properties of the pancreatic juice. It converts 200 times its weight of hydrous starch to loss of blue iodine reaction in ten minutes when tested according to the method of Blome (Pharm. Rev., 1906, vol. 24, p. 200). According to the method adopted by the Council it converts 113 parts of anhydrous starch to the colorless end point in ten minutes (JOURNAL A. M. A., July 11, 1908, p. 140; Jour. Am. Chem. Soc., May, 1908, p. 798). For the methods of testing for the different enzymes see Pancreatic Preparations.

Actions and Uses.—Panase may be employed as a substitute for the pancreatic juice in cases in which it is believed that the enzymes of the pancreas are deficient or in which it is desired to hasten the digestion of starch.

Dosage.—0.13 Gm. (2 grains) or more.

Panase Essence.—Essentia Panasi. A mixture containing in each 100 Cc., 4 Gm. of panase in a menstruum containing 14 per cent. of alcohol and 12.5 per cent. of glycerin with small amount of flavoring matter and sugar. Dose 4 Cc. (1 fluidram) containing 0.16 Gm. (2½ grains) of panase.

Panase Tablets.—Each tablet contains panase, 0.13 Gm. (2 grains).

Manufactured by Frederick Stearns & Co., Detroit, Mich.

SPIROSAL.—Spirosal, $C_6H_3OH.CO.O.CH_2.CH_2.OH = C_9H_{10}O_4$, is the monoglycol ester of salicylic acid.

It is prepared by the action of ethyleneglycol on salicylic acid. Spirosal is an almost odorless and colorless oily fluid, with a boiling point of 169-170° C. (336.2 to 338° F.) at 12 mm. pressure. It is easily soluble in alcohol, ether, chloroform and benzol and soluble in about 110 parts of water and 8 parts of olive oil.

Tests. 0.5 Gm. spirosal is saponified with 5 Cc. soda lye by slight warming, the clear fluid diluted with water and acidified with dilute sulphuric acid; fine crystalline needles of salicylic acid are formed, which, after being extracted with ether and the latter then evaporated, can be identified by the melting point and ferric chloride reaction. The saturated watery solution obtained by shaking 1 Cc. spirosal with 50 Cc. of water gives a filtrate, which becomes intensely violet on addition of ferric chloride, but should not be changed by barium nitrate or silver nitrate. 0.5 Gm. of spirosal when added to 2 Cc. of concentrated sulphuric acid should be given a light yellow and not a brownish color. 0.3 Gm., if incinerated on platinum foil, should not leave any weighable residue.

Actions and Uses.—Spirosal is said to be easily absorbed by the skin without causing irritation even when rubbed in thoroughly. It splits off salicylic acid in the tissues.

Spirosal is said to be useful for the external treatment of rheumatic affections.

Dosage.—It is used undiluted or mixed with 2 to 3 parts of alcohol or in a mixture with olive oil, 1 to 8, or in ointments with equal parts by weight of petrolatum or lard.

Manufactured by Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. (Farbenfabriken of Elberfeld Co., New York.) U. S. patent No. 794,982. U. S. trademark No. 62,856.

(To be continued.)

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE . . . CHICAGO, ILL.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

[For other information see second page following reading matter]

SATURDAY, OCTOBER 31, 1908.

NITRITE POISONING BY INGESTION OF BISMUTH SUBNITRATE.

The introduction of subnitrate of bismuth into the stomach and bowels, for the purpose of establishing by radiography abnormalities in the position, function or size of these organs, has been regarded as an entirely harmless procedure. That such is not always the case is shown by recent observations at the medical clinic in Marburg, which it may be well to recapitulate at this time by way of suggestion to those who are using subnitrate of bismuth in the way indicated, as well as in other ways.

The first case (Brennecke and Hoffmann) concerns a 3-weeks-old child with severe gastrointestinal disturbances; after a period of improvement vomiting reappeared and the possibility of pyloric stenosis had to be considered; a suspension of 3 or 4 grams of subnitrate of bismuth in 100 c.c. of buttermilk was introduced into the stomach and an *x*-ray transillumination made. About twelve hours later the child became cyanosed and died in collapse, the postmortem showing marked methemoglobinemia. Chemically, considerable bismuth was found in the blood and in the liver. The cause of death was regarded as bismuth poisoning.

From the same clinic Böhme[1] reports a similar case, together with experiments, that throw new light on the nature of the poisoning. Böhme's patient was an atrophic, rickety child, 1½ years old, into whose stomach a suspension of bismuth subnitrate was introduced for transillumination, after which the subnitrate was washed out. Some general improvement then set in, but on account of an excessive meteorism a bismuth suspension was introduced two days later into the large intestine and another *x*-ray illumination made. Three hours later the child became markedly cyanosed and dyspneic and died in collapse. In this case also the autopsy showed marked methemoglobinemia, the entire blood being brownish-red, largely fluid, while the mucous membranes as well as the dependent parts of the skin were of a brownish-red color. In this case no bismuth could be demonstrated in the liver or in the blood, but nitrites were present in the blood and in the pericardial fluid. This demonstration no doubt explains the clinical phenomena in both cases since nitrites cause methemoglobinemia, cyanosis and asphyxia. It is reasonable to assume that the nitrites discovered in the blood in the second case were derived from the bismuth subnitrate introduced into the body and were the cause of the intoxication. The symptoms produced by bismuth are different.

Ordinarily, bismuth subnitrate is regarded as an insoluble material without any special effect on the organism. It is true that under the influence of acid juices a small amount may undergo solution in the body, but not sufficient to cause any symptoms so far as ordinarily known. As many bacteria readily reduce nitrates to nitrites, Böhme experimented to determine whether or not bismuth subnitrate undergoes decomposition with the formation of nitrites in the presence of the colon bacillus and when mixed with human feces. He found that in the test-tube a mixture of bismuth subnitrate with colon bacilli or with feces gives rise to nitric acid and that the production of nitric acid is greater and more regular when the feces of nurslings are used than feces from adults. He also shows that under special circumstances in cats and rabbits nitrites may be formed from bismuth subnitrate and absorbed into the circulation so that nitric acid appears in the urine and in the blood. Whether the *x*-ray has any action on bismuth subnitrate does not seem to have been studied.

The practical lesson from these observations is that the introduction of large quantities of bismuth subnitrate may lead to the formation and absorption of nitrites which in turn may cause methemoglobinemia and death. Consequently a substitute for the subnitrate should be found, and perhaps the subcarbonate may answer the purpose.

1. Arch. f. exp. Path. u. Pharmakol., 1907, lvii, 441.

LESSONS OF THE TUBERCULOSIS CONGRESS.

Undoubtedly the most interesting phase of thought presented at the recent International Congress on Tuberculosis was the thorough-going optimism of all the world authorities on the disease as to the possibility of its complete eradication. In spite of the fact that at present tuberculosis carries off such a large number annually—one in eight of our population, it is stated—the men who know most about the disease are practically a unit in declaring that it is only a question of time, of education, and of the enforcement of definite preventive regulations till the disease shall not only cease to be the scourge that it is, but be under absolute control. This conclusion is reached notwithstanding that it is now more than ever acknowledged that at present practically every member of the human race who has reached the age of 30 has or has had tubercle bacilli somewhere in his body and presents definite tissue signs of that invasion. This point was forcibly insisted on by the surgeon-general of the Russian army, but his opinion is

only an emphatic expression of what has come to be generally realized.

It is not the tubercle bacillus that counts for so much in the fatality of the disease as the condition of the patient in whose tissues it finds lodgment. Seven-eighths of us are capable of resisting the invasion of the bacillus, not only before but even after it has gained some foothold in our tissues. We now know that the one most efficient aid in the increase of resistive vitality is fresh air. Even when the bacillus is rapidly making headway in a reasonably strong patient, life in the open air will enable that individual to resist it successfully. It is because people live in confined quarters, rebreathe air, submit to having their lungs irritated by dust of all kinds, and put up with other similar conditions connected with our present mode of life, that pulmonary tuberculosis is making such great ravages. Tuberculosis is principally an urban disease, and as in modern times the large city is becoming more and more the home of the majority of the population, it is evident that the conquest of tuberculosis depends on the enforcement of sanitary principles in large cities, especially in the matter of provision of air in dwellings and the regulation of ventilation in factories and industries of all kinds.

This is as important as the prevention of the distribution of the bacillus from person to person. In spite of the fact that an individual may harbor the tubercle bacillus in his tissues, it is not dangerous as a rule, if he has air and food enough, unless he has been seriously weakened by disease. Factory inspection, ventilation laws, tenement-house reforms — these are the problems which, according to the recent International Congress, mean as much for the crusade against tuberculosis as the sanitary regulation of the disposal of sputum, the prevention of public spitting and the cleansing of dwellings after tuberculous patients have lived and died in them. These latter are valuable measures, but they represent only a few of the factors in the prevention of the spread of tuberculosis, the most important of which involve the ventilation problems of our crowded populations whether in city or country.

Koch's insistence that eleven-twelfths of all the tuberculosis which affects the human race, and that practically all the pulmonary tuberculosis which is by far the most dangerous and fatal type of the disease, comes from human sources must have consideration. It should make us realize just where and how our efforts must be concentrated for the improvement of conditions so as to lessen the danger from the disease. If we have been willing and ready to spend money on the prevention of the spread of disease through the intestinal tract by regulations with regard to the health of cattle and the inspection of dairy herds and of meat, we should be willing to do the same for corresponding legal regulation with regard to consumption. The logical outcome of Koch's view is that one tenement house badly ventilated in a large city may do much more than a dairy herd infected with tuberculosis in spreading the disease. Also that a single factory in which there is no provision for the carrying off of dust, and in which the rebreathing of air is inevitable, will foster more cases of tuberculosis than probably all the butcher shops of a large city would occasion even if uninspected. Our regulation of animal tuberculosis has been admirably carried out; it has been worth all that has been spent on it and more. Now we must do at least as much for the regulation of conditions relating to human life that will effectively aid in preventing the spread of tuberculosis among human beings.

YELLOW FEVER IN FRANCE.

Nine cases of yellow fever have developed at Saint Nazaire, a port at the mouth of the river Loire, about thirty-eight miles west of Nantes, France. The patients were sent to a hospital and five died. The American consul at Nantes reported[1] that the disease was imported by a French steamship from Fort-de-France, Martinique, where there were forty-five cases, with eleven deaths, from June 27 to September 26. The cases at Saint Nazaire occurred ashore several days after the vessel had been given pratique and the passengers had landed.

It is a well-known fact that at various times yellow fever has gained a foothold in Europe. Its appearance in European ports on board vessels and at quarantine stations in the past has not been an unusual occurrence. The last cases previous to the present appearance at Saint Nazaire were in 1894 at Trieste, Austria, where two deaths occurred from the disease. The patients were sailors who landed at Genoa from Brazil and went by land to Trieste.

Epidemics of yellow fever in Europe are rare, though at times they have been disastrous. In a "History of Yellow Fever in Europe" by Assistant Surgeon-General J. M. Eager,[2] it is stated that the initial advent of the disease in Europe was at Lisbon in 1723. During a devastating epidemic at Barcelona in 1821 approximately 25,000 persons died within five months of yellow fever. At Lisbon, in 1857, the disease prevailed for five months and 13,000 persons were stricken, the mortality being almost 50 per cent.

The city of Saint Nazaire, from which the present cases are reported, is of interest from an epidemiologic point of view owing to the fact that, in 1861, there occurred at that place the only important epidemic of yellow fever that ever broke out in France. By a curious coincidence, both in the present outbreak and in the epidemic of 1861, the disease originating in the West Indies entered the port of Saint Nazaire unobserved.

1. Public Health Reports, Oct. 23, 1908; also mentioned in the Paris Letter, THE JOURNAL A. M. A., Oct. 31, 1908.
2. Bulletins of the Yellow Fever Institute, Public Health and Marine-Hospital Service.

In June, 1861, a ship of the port of Nantes, the *Anne-Marie*, with a crew of sixteen, sailed from Havana, laden with barrels of sugar between the tiers of which layers of sugar cane were placed to dress the cargo properly. The history of the cruise is the typical story of an old-time pest ship. There were violent rains and broiling calms, and during the voyage nine sailors fell sick and two died. In this condition the ship entered the port of Saint Nazaire, twenty days after the last death and ten days after the inception of the final case of suspicious illness. Since no case of sickness had occurred during the last ten days and all were well on board at the time of arrival, the vessel was given free pratique. An epidemic followed in the shipping of the harbor and in the neighboring places ashore. Seven vessels were infected, on which there were forty cases of yellow fever and twenty-three deaths. All the infected vessels were stationed down the wind from the *Anne-Marie*. Two neighboring ships, one belonging to the French navy, the other a passenger transport, were posted near the *Anne-Marie*, but up the wind, and remained free from yellow fever. This epidemic is of unusual interest inasmuch as it has been held that the facts adapt themselves in a perfect fashion to the theory of the propagation of yellow fever by mosquitoes.

As regards the cases of yellow fever recently reported at Saint Nazaire both the season of the year and a full understanding of the etiology of the disease are fair guarantees of its speedy subsidence.

THE DEADLY TYPHOID CARRIERS.

In our news department last week we gave an account of the discovery of a typhoid bacilli carrier. Twenty-six cases of typhoid in Georgetown, D. C., between October 8 and 15 were traced through milk to one dairy farm in the neighborhood. Investigation developed that the employés were healthy and that no case of typhoid had occurred among them for years; no other source of infection could be found. Finally, a systematic examination was made of the dejecta of all employés. This brought to light the presence of large numbers of typhoid bacilli in the dejecta of a woman milker of the dairy who had had typhoid fever eighteen years before. Albert[1] has recently reported a similar outbreak of typhoid likewise attributed to infection of milk by a bacillus carrier, and in the article by Trask in this number of THE JOURNAL two other instances are recorded of the connection between bacillus carriers and typhoid infected milk. The remarkable series of infections in seven different families traced by Soper[2] to a bacillus-bearing cook is still fresh in the minds of our readers.

Such cases encourage the belief that the obscurity that surrounds certain outbreaks of typhoid can often be dispelled by the bacteriologic examination of persons engaged in handling milk or other foods. The absence of a history of recent or remote typhoid can no longer be taken as conclusive.

It is not reassuring to contemplate the possibilities of infection through typhoid carriers. What security is offered at present that certain milkers in "certified" or "inspected" dairies may not belong to this class? Must the housewife, struggling with the "servant problem," require from the prospective cook a certificate that she is free from the typhoid bacillus? It is interesting to speculate to what degree the evil touch and the ill luck attributed to the presence of certain individuals has a bacterial basis.

Whatever new complications the existence of the wandering bacillus carrier may introduce into the work of public-health officials, it is perfectly clear that, since the number of carriers bears a distinct relation to the amount of typhoid in a community, any reduction in the totality of the disease will affect absolutely the number of carriers. The safeguarding and purification of the water supplies in the United States in the last few years have done much to diminish the extent of water-borne typhoid, but it must not be forgotten that in many communities the character of the water supply is still an urgent problem. Two articles[3] in this number of THE JOURNAL vividly portray conditions still existing. The cumulative influence of preventive measures is as marked here as in some other infectious diseases. Diminish the amount of water-borne disease and we thereby reduce the number of typhoid carriers, and so lessen the opportunities for a long series of milk-borne epidemics.

When the bacillus carrier is once found, a satisfactory method of dealing with him is not yet assured. In many cases, perhaps in the majority, the source of the continued supply of bacilli is in the gall bladder, and up to the present the attempts at a permanent internal disinfection have not proved successful. An operation on the gall bladder might remove the source of infection, but there are evident objections to this procedure. Park[4] has clearly set forth some of the serious features of this new problem that health officials have to meet.

MEDICAL EDUCATION IN LONDON.

In "An Address to Students," the London *Lancet*[5] points to some of the problems at present confronting the London medical colleges. All the twelve medical schools affiliated with the University of London continue to teach the fundamental branches—anatomy, physiology and chemistry—with the result that several of the schools have classes which are pitiably small. In some instances the teachers are miserably paid and there are not sufficient funds for the needed equipment for laboratories and demonstrations. There is also much dupli-

1. Hygienic Laboratory Bull. No. 41, p. 49.
2. THE JOURNAL, Jan. 15, 1907.
3. Dutton and Breitenbach, pp. 1496 and 1499.
4. THE JOURNAL, Sept. 19, 1908.
5. Aug. 29, 1908.

cation and triplication of courses so that the University of London seems to be suffering from an excess of machinery. It is claimed also that undue importance is attached to these fundamental branches. Anatomy, physiology and chemistry are of much importance and for special cases deserve the fullest attention, but for the average student are chiefly to be studied for the bearing which they have on the practice of medicine and surgery. At present much is being taught in those subjects which is of no direct use to the medical student. Again, so extensive has become the domain of medical knowledge that a general adjustment of the medical curriculum seems necessary owing to its present overloaded character. The following statement needs no comment:

"There is not time, there is not a possibility of one man being able to become an experienced clinician whether in medicine or surgery and at the same time be experienced in all the laboratory processes which now form so important a part of modern diagnosis and treatment." The chief blame is laid on the examining bodies whose demands of minute details at examination must be met by the educational bodies. There seems to be need, therefore, that the qualifying examinations be modified and made less burdensome.

The problems connected with medical education, and which have developed through the increase and broadening of the knowledge on which the medicine of to-day depends, are not for one country alone to solve. A study of what other countries are doing in the matter will be of interest to those who are planning a readjustment of the medical curriculum of our own country, and may prevent our having to contend with similar difficulties.

"HEALTH-PRODUCING DISEASES."

A common idea indulged in by the general public is that some serious disorders, such as smallpox and typhoid, when recovered from leave the patient in an improved condition of health. To a certain extent this is based on fact; some diseases leave the patient immune and some disorders, that have but a slightly deleterious effect on the system in general, make the patient at least feel better, if only by contrast, when they are over with. Seasickness is notably one of these with a large proportion of its victims. Again, many people live under hygienic conditions only when they are sick; and rather severe organic lesions might possibly be compensated for by the general benefit due to the enforced abstinence from insanitary habits and modes of living. In modern conditions it is possible for a nervous breakdown of some specially strenuous individual to be prevented or postponed by the rest obtained through a sickness. All general practitioners can relate instances of this kind. At the same time there seems to be a real antagonism between certain diseases, there being seemingly good evidence that a mitral lesion is to a certain extent a prophylactic against pulmonary tuberculosis. When, however, as in a recent item going through the lay press, the statement is made that such disorders as typhoid improve the general health, it is time to make a correction. We so rarely see a severe case of smallpox that almost anything can be said about it without contradiction; few physicians can tell much about the outcome of such a disease from their personal observation. Before the days of vaccination its lasting bad effects were sufficiently observable and it left many of its victims in such a condition that they could almost justifiably wish that they had not recovered. To say, however, that typhoid benefits if it does not kill is an extreme assertion. Too many of us have seen uncomfortable sequelæ to coincide with such a statement. The claim also that chronic bronchitis improves the health of elderly persons is another unverifiable assertion, and there are few probably who experience the so-called benefits who would not be willing to forego them. Such statements are examples of a sort of pseudohygienic stuff which is altogether too popular with the public.

Medical News

COLORADO.

County Society Organized.—The medical men of Morgan County met at Fort Morgan, September 26, organized a county medical association, and elected Dr. Arthur F. Williams, Fort Morgan, secretary.

Food Products Must Be Screened.—The Colorado State Board of Health has ruled that the display of food products for sale, unless completely screened against flies, is a nuisance, and that dealers will be prosecuted for violation of the rule.

Personal.—Dr. Michael D. Healey, Denver, has returned from abroad.——Dr. Peter O. Hanford, Colorado Springs, who was injured in an automobile accident recently, has recovered and resumed practice.——Dr. Francis B. Rothrock, Colorado Springs, has gone to Vienna.

Typhoid in Denver.—There have occurred in Denver 53 cases of typhoid fever among 130 families supplied by a dairy in an adjoining county. No cases have occurred in families where the milk was boiled. Six deaths have resulted. The wife of the dairyman referred to had typhoid fever, and the excreta were not properly guarded. It is believed the infection was conveyed by flies, as gelatin plates exposed in the milk house showed cultures of colon and typhoid bacilli. The dairy has been closed. The Denver Dairyman's Association has inaugurated a series of lectures on "The Sanitation of Dairies."

Charged with Hiding Typhoid.—It is reported that sixty physicians of Denver have been arrested for having failed to make proper reports on typhoid fever and other infectious diseases. Dr. Hugh L. Taylor, secretary of the State Board of Health, and Dr. Lewis E. Lemen were arrested October 9 on warrants issued by Dr. William H. Sharpley, the health commissioner, on the charge that they had not reported to the department cases of typhoid fever under their care at Mercy Hospital. On October 13 they are said to have been found guilty and fined each $20 and costs. The defendants are said to have admitted technical guilt.

GEORGIA.

Prescriptions for Alcohol.—During September the physicians of Athens are reported to have issued 103 prescriptions for alcohol, and of these 55 were issued by four men.

Municipal Laboratories.—The board of sanitary commissioners of Savannah announces the opening of the city bacteriologic laboratory. It occupies four rooms in the city hall and will be supported by the board as an aid to the control of public health, and for the study of problems in sanitary science. Dr. V. H. Bassett, formerly assistant superintendent and pathologist of the Milwaukee County Hospital, has been made director.—The Augusta Board of Health has opened its bacteriologic laboratory under Dr. William C. Lyle, city chemist and acting president of the board. The room adjoining the bacteriologic laboratory is to be equipped as a chemical laboratory.

ILLINOIS.

Communicable Diseases.—Maywood is said to be suffering from an epidemic of typhoid fever, 25 cases having been reported in the last ten days.——Batavia reports 9 cases of ty-

phoid fever.——Scarlet fever is reported from Carpenterville, and East and West Dundee.——Braceville is reported to have a number of cases of diphtheria.

State Conference of Charities.—At the thirteenth annual session of the Illinois State Conference of Charities, held at the Illinois Western Hospital for the Insane, Watertown, the conference went on record as favoring the establishment of a state colony for epileptics, a state sanatorium for tuberculosis, and the extension of the work of the visitation of children. A resolution was also advanced by Dr. W. E. Taylor, calling for a state law for physicial and mental examination before the issuance of marriage licenses. The following officers were elected: President, William C. Graves; secretary of the state board of charities, Springfield; vice-president, Rev. James J. Shannon, Peoria; secretary, Dr. Frank P. Norbury, Jacksonville; assistant secretary and chairman of the committee of exhibits, Harry N. Heiser, Peoria; executive committee, Alexander M. Wilson and Allen J. Burns, Chicago; Burton F. Peck, Moline; Dr. J. W. Pettit, Ottawa; Henry Davis, Springfield; Mrs. Mary Robinson, Rock Island, and Miss Julia Lathrop, Rockford; committee on tuberculosis, Dr. Everett J. Brown, chairman, Decatur; committee on epilepsy and improved condition of the insane, Dr. George A. Zeller, chairman, Peoria; committee on children, Mrs. Richard McCauley, chairman, Normal; legislation, Sherman G. Kingsley, chairman, Chicago; social legislation, Dr. Charles R. Henderson, chairman, Chicago; penology and nominating committee, Dr. F. Emory Lyon, chairman, Chicago; committee on voluntary agency and the needy family, Miss Dina Ramsey, chairman, Rock Island; and committee on public care of poor, S. T Metcalf, chairman, Buffalo.

Chicago.

Back from Europe.—Dr. and Mrs. Philip S. Doane returned from Europe October 25.——Dr. Alexander H. Ferguson has returned from Europe.

Doherty Dies.—Dr. David J. Doherty, who had a second attack of cerebral hemorrhage October 23, died October 27, in St. Benedict's Hospital. Further notice will appear in THE JOURNAL November 7.

Hospital Merger.—The Central Hospital Association has acquired the property of the Central Hospital, 309 Fifth Avenue, the Woman's Hospital, Thirty-second Street and Rhodes Avenue, and the Illinois Hospital at Washington Boulevard and Halsted Street. Dr. Jacob F. Burkholder is announced as president of the association.

Hospital Cornerstone Laid.—The cornerstone of the new South Chicago Hospital was laid October 25, by H. M. Sloan, president of the association, assisted by Drs. William A. Evans, health commissioner, Albert W. McLaughlin and Engelbrecht Nelson. The hospital will cost $25,000, and will accommodate 60 patients. The building is to be three stories in height, 100 feet long and 50 feet deep.

Deaths of the Week.—During the week ended October 24, 510 deaths were reported, equivalent to an annual death rate per 1,000 of 12.28. Most notable among the deaths is the increase in the mortality from diphtheria, from which 20 deaths were reported. Acute intestinal diseases caused 60 deaths; pneumonia, 53; heart diseases, 46; consumption, 42; violence (including suicide), 40; nephritis, 37; and cancer, 30. In addition to the 20 deaths noted from diphtheria, 11 deaths each were reported from scarlet fever and typhoid fever, and one death from influenza.

Society Meetings.—At the annual meeting of the Chicago Gynecological Society, October 16, the following officers were elected: President, Dr. Henry F. Lewis; vice-presidents, Drs. Charles E. Paddock and Rudolph W. Holmes; secretary, Dr. Gustav Kolischer; treasurer, Dr. Charles B. Reed; editor, Dr. Emil Ries; pathologist, Dr. George Schmauch; councilor, Dr. Robert T. Gillmore; and alternate, Dr. Channing W. Barrett. ——At the twenty-first annual meeting and banquet of the Scandinavian-American Medical Society of Chicago, held October 15, Dr. O. Theodore Roberg was elected president; Dr. E. Olsen, vice-president, and Dr. Andreas Klovstad, secretary-treasurer.

Contagious Diseases.—A total of 556 cases of contagious diseases was reported for the week, an increase of 142 over the preceding week, and of 277 over the corresponding week of 1907. The cases were distributed as follows: Diphtheria, 171; scarlet fever, 158; typhoid fever, 89; tuberculosis, 57; measles, 34; pneumonia, 20; chickenpox, 15; whooping cough, 6; smallpox, 1; puerperal fever, 1, and diseases of minor importance, 9. As compared with the preceding week, there was an increase of 30 cases of diphtheria; 50 of scarlet fever; 25 of measles; 27 of tuberculosis; and 9 of chickenpox, while typhoid fever decreased 15 cases.

INDIANA.

Physicians' Club Formed.—The Newcastle Physicians' Association was organized September 22, Dr. Elmer H. Brubaker being elected president; Dr. H. H. Koons, vice-president; Dr. Clifford E. Canaday, secretary-treasurer.

Hospital Notes.—St. Joseph's Hospital, Logansport, is under cover, and expects to be ready for occupancy January 1.—— Reid Memorial Hospital, Richmond, is reported to be more crowded than ever before in its history. The majority of the patients are typhoid-fever cases from the Wernie Home.

KENTUCKY.

Free Dispensary Established.—The free clinic and dispensary established in the Good Samaritan Hospital, Lexington, with Dr. David Barrow, president; and Dr. Thomas C. Holloway, secretary, was formally opened October 5.

State Medical Society Incorporated.—The articles of incorporation of the Kentucky State Medical Association were filed September 30, with the clerk of Warren County. For the purpose of organization the president, vice-presidents, and secretary were designated, and the association is organized without capital stock, and not for private gain.

MARYLAND.

Deaths of the Week in Baltimore.—The death rate for last week was the lowest for several years, 14.16 per 1,000. The leading causes of death were consumption, 25; nephritis, 16; heart diseases, 13; pneumonia, 11; cancer, 9; typhoid fever, 7.

Society Election.—At the annual meeting of the Allegany County Medical Society, held in Cumberland recently, the following officers were elected: President, Dr. Timothy Griffith, Frostburg; vice-president, Dr. Henry W. Hodgson, Cumberland; secretary-treasurer, Dr. Charlotte B. Gardner, Cumberland; and censor, Dr. James C. Holdsworth, Eckhart Mines.

Academic Day.—The University of Maryland will celebrate "Academic Day" November 11, the anniversary of the founding of the department of arts and sciences. A musical program in charge of Dr. B. Merrill Hopkinson will be given, after which academic exercises will be held, at which a bronze tablet to the memory of the late Major James Carroll, Medical Corps, U. S. Army, will be unveiled in the main medical building. Dr. William H. Welch will deliver the principal address.

Personal.—Dr. Anna S. Kugler, Baltimore, for twenty-five years medical missionary in Madras, India, left last week for Guntur, India.——Dr. Betty Nilsen, Baltimore, has left for Rajamundry, India, for missionary service.——Dr. James D. Iglehart, Baltimore, was elected secretary, and Dr. John H. Jamar, Elkton, a member of the board of managers of the Sons of the American Revolution, October 19.——Dr. Henry L. Naylor, Pikesville, has succeeded Dr. Harry C. Hess, Govans, as secretary of the Baltimore County Medical Society.——Dr. Josiah S. Bowen is reported to be ill with pneumonia at his home in Mount Washington.

Bayview a Disgrace.—Bayview, the city almshouse and hospital for the sick poor at Baltimore, after investigation by Dr. Carey B. Gamble, Jr., is announced to be a disgrace, overcrowded and unhygienic, so that many inmates do not have proper light and air. Men are said to be quartered in places formerly used for coal bins and known as "the tunnel." The board of supervisors of the city charities has asked for an appropriation of $150,000 to erect an addition to the hospital to meet the emergency. The idea of the board is put up a group of buildings for hospital purposes, and also a heating and pumping plant so the present building may be used for almshouse purposes only. Dr. Arthur D. Herring, secretary of the State Lunacy Commission, advocates the abolition of the insane department at Bayview, advises that its patients be placed in the state institutions and that a new building be erected for the reception of acute insane recoverable patients of Baltimore. He pronounces Sylvan Retreat in the Alleghenies the best county asylum in the state. The conditions at Montevere Hospital, Frederick County, were bad beyond description. The conditions were likewise unsatisfactory in Worcester, Somerset, Wicomico, Dorchester, Talbot, Caroline and Kent counties.

NEW HAMPSHIRE.

In Memoriam.—The American Electro-Therapeutic Association, at its recent meeting, adopted resolutions regarding the death of Dr. John D. Holt, Berlin, extending sympathy to his wife and family in their bereavement.

State Sanatorium.—Work has already been begun on the State Sanatorium for Tuberculosis, at Glen Cliff, Warren Summit, in the town of Warren. The main building is to be constructed of brick and the bungalows of wood.

Communicable Diseases.—On account of the epidemic of diphtheria in the State Industrial School, Manchester, all the inmates have been given prophylactic inoculations of antitoxin.——The public schools of Lebanon were closed last month on account of an epidemic of scarlet fever.

County Society Meeting.—At the annual meeting of Cheshire County Medical Society, held in Keene October 13, the following officers were elected: President, Dr. Arthur A. Pratte, Keene; vice-president, Dr. Arthur W. Hopkins, West Swanzey; secretary-treasurer, Dr. William M. Robb, Keene; censor, Dr. Walton H. Aldrich, Marlboro; and delegate to the state society, Dr. Bayard T. Mousley, Alstead.

NEW JERSEY.

Leper in Camden.—Charles Clark, a 16-year-old negro boy, was isolated in the County Almshouse at Blackwood, Camden County, October 15, suffering with leprosy.

Personal.—Dr. Richard M. Davis has succeeded Dr. Henry Chavanne, resigned, as a member of the board of health of Salem.——Drs. Henry C. Power, James H. Lawrey, James H. Trainor, Edward W. Sprague, Edward F. Fitzpatrick, Samuel Hirschberg, Lazare Weiss, Pliny W. Barber, Albert S. Harden, Whitman B. W. Leyenberger and Mary E. Broadwax have resigned as district physicians of Newark.

September Vital Statistics.—The total number of deaths reported in the state for the month ended September 15, was 3,464, or more than 400 above the average for the previous twelve months. Infantile diarrhea caused 699 deaths; diseases of the nervous system, 385; tuberculosis, 331; diseases of the circulatory system, 315; diseases of the digestive system, 278; nephritis, 183; cancer, 134; and pneumonia, 103. Of the communicable diseases, typhoid fever caused 45 deaths; whooping cough, 38; diphtheria, 23; measles, 9; scarlet fever, 7.

NEW YORK.

Sanatorium Safe.—The forest fires reported around Stonywold Sanatorium, near Lake Kushaqua, are reported to be under control.

Want Municipal Hospital.—Dr. Julius Ullman, representing the Buffalo Academy of Medicine, and Dr. John D. Bonnar, representing the Erie County Medical Society, have petitioned the common council to make provision for a municipal hospital for contagious diseases. At present they claim there is accommodation in Buffalo for only 28 patients.

Impure Food Destroyed.—More than 22,000,000 pounds of foodstuffs, valued at $1,500,000, has been destroyed by the food inspectors of Greater New York within the past year. The greater part of the goods condemned consisted of fruits, vegetables and canned goods. It is said that there is not as much danger from impure foods under the present methods of inspection as formerly.

Communicable Diseases.—A number of cases of diphtheria are said to exist at Greatneck and Manhasset.——Nine cases of diphtheria were reported in the Kaplan school, Jamaica, October 15.——Only four cases of diphtheria occurred among the children in the Ottilie Orphan Asylum, Jamaica, owing to the prompt action of the house physician in reporting the matter to the board of health, and the action of the board in protecting the other children against the disease and fumigating the dormitory and different rooms of the institution.——During the first seventeen days of October, 114 cases of scarlet fever were reported to the health department of Buffalo.

Personal.—Dr. Benjamin W. Cornwell, Williamsville, who has been critically ill with typhoid fever, is reported to be improving.——Dr. Lewis J. Davis, Watertown, fell down a flight of stairs in a café October 5 and sustained a fracture of the base of the skull. His recovery is considered doubtful.——Drs. George L. Fischer, James F. Whitwell, Harry Mead, Nelson W. Bodenbender, Augustus W. Hengerer, George W. Seitz, Gustav A. Hitzel, Arthur G. Bennett, Martin J. Downey, Thomas H. McKee, Henry E. Stadlinger, David A. Morrison, Leonard Reu, Henry C. Buswell, Charles R. Cullinane, James P. Barr, Edward J. Meyer, Max C. Breuer, and Ray H. Johnson have been added to the staff of the German Deaconess Hospital, Buffalo.

New York City.

Gift to Hospital.—It was announced October 14, that James S. Kennedy, New York City, had given a million dollars to the Presbyterian Hospital, of which he is president, to be used in the construction of buildings.

Lower Death Rate.—The Health Department reports that the city death rate for the week ending October 17 was 12.20, as against 13.50 for the corresponding week of last year.

Tuberculosis Exhibit to Come.—The money necessary to bring the tuberculosis exhibit here from Washington has been appropriated to the board of health by the board of estimate. The corporation counsel decides that this exhibit is essential for the instruction of citizens in matters pertaining to health.

Smallpox at Patchogue.—Dr. Eugene Porter, State Health Commissioner, has been apprised of the smallpox epidemic at Patchogue, Long Island, and unless local authorities compel vaccination the state will interfere and place the town in quarantine. It is reported that there are thirty cases of smallpox, and the local authorities are powerless to enforce vaccination or quarantine.

Hotel Opens Surgical Ward.—The Waldorf-Astoria has opened the first emergency surgical hospital ever installed in a hotel in this city. Dr. Calvin T. Adams has been placed in charge of the room, which is fitted up in a thoroughly modern way. While the room is intended primarily for the guests in the hotel, it will be at the disposal of any ambulance surgeon called to the neighborhood who finds a patient needing immediate attention.

Personal.—Dr. William Seaman Bainbridge returned from Europe October 23.——Dr. John F. Erdmann has resigned as clinical professor of surgery at the New York University and Bellevue Hospital Medical School, and has been appointed professor of surgery in the New York Post-Graduate School and Hospital.——Dr. Mary M. Crawford, ambulance surgeon of the Williamsburg Hospital, has taken up her duties as assistant house physician in the institution.

Contagious Diseases.—There were reported to the sanitary bureau for the week ending October 17, 486 cases of tuberculosis, with 138 deaths; 311 cases of diphtheria, with 19 deaths; 119 cases of measles, with 2 deaths; 109 cases of scarlet fever, with 5 deaths; 105 cases of typhoid fever, with 23 deaths; 22 cases of whooping cough, with 5 deaths; 4 cases of cerebrospinal meningitis, with 7 deaths; 30 cases of varicella and 1 case of smallpox, a total of 1,187 cases and 199 deaths.

Hospitals Suffer from Insufficient Funds.—The report made by the visiting committee of the State Charities Aid Association, which has just been submitted to the board of estimates and the mayor, states that the failure of the municipal government to provide sufficient funds for the hospitals and public charities makes it impossible for these institutions to secure sufficient help, and that consequently the lives of the patients are endangered. Much of the help comes directly from the workhouse and these attendants are careless and even brutal. It is said that not even enough money for food is allowed.

An Attractive Program.—The New York Academy of Medicine devoted its meeting, October 29, to a lecture by Dr. Charles A. L. Reed, Cincinnati, on "The Character, Status and Economic Value of a National Department of Public Health." At the meeting of November 5, Dr. John C. Munro, Boston, will read a paper on the "Surgery of the Bile Passages with Special Reference to End Results." At the meeting of November 19, Major Charles Lynch, Medical Corps, U. S. Army, will deliver the anniversary address on "Medical Service in a Modern Army in War, as Exemplified by the Japanese Army in the Russo-Japanese War."

Psychic Clinic Opened.—Cornell University Medical College has established what is said to be the first psychotherapy clinic ever established in this city in connection with a professional school. It is modelled after the one established two years ago at Johns Hopkins University, and is in charge of Drs. Leslie Meacham and Beatrice M. Hinkle. The treatment is based on the ability of the physician to reach the subjective mind of the person to whom he administers. The work endeavors to help people with mild delusions, acute melancholia, victims of drink and drug habits. Those having violent obsessions are not considered.

St. Luke's Hospital Anniversary.—At the fifteenth anniversary of the officers of St. Luke's Hospital, plans for the introduction of new features into the hospital work were discussed. It was shown that the patients remained in the hospital on an average longer than in most hospitals, and yet that there was great need of a convalescent home. The value of social work among patients of small means who required some medical attention and yet were not in need of hospital accommodations was emphasized and a plea for funds to carry on such a work was made. The legacies received during the year amounted to $300,000. During the year 863 patients were treated, 71 per cent. of whom were free patients. The

present accommodations provide for 300 patients, but when the buildings are completed there will be accommodated 600 patients. At present two wards are closed because of lack of funds.

Harvey Society Lectures.—The fourth course of lectures of the Harvey Society, under the patronage of the New York Academy of Medicine, commenced October 24, when Prof. A. Calmette, director of the Institut Pasteur de Lille, France, delivered a lecture on "Intestinal Infection and Immunity in Tuberculosis." The following lectures will complete the course:

November 7.—Prof. W. G. MacCallum, Johns Hopkins University, "Fever."
November 21.—Prof. Graham Lusk, University and Bellevue Hospital Medical College, "Metabolism in Diabetes."
November 28.—Dr. Wilhelm Falta, University of Vienna, "Therapeutics of Diabetes."
December 5.—Dr. M. J. Rosenau and Dr. John F. Anderson, U. S. Public Health and Marine-Hospital Service, "Anaphylaxis."
December 19.—Prof. A. B. MacCallum, University of Toronto, "Osmosis."
Jan. 9, 1909.—Prof. J. B. Leathes, The Lister Institute of Preventive Medicine, England, "The Relation of the Liver to the Metabolism of Fat."
February 6.—Prof. Philip Hanson Hiss, Columbia University, "Some Problems in Immunity and the Treatment of Infectious Diseases."
March 6.—Prof. C. B. Davenport, Station for Experimental Evolution, Cold Spring Harbor, "Heredity in Man."

PENNSYLVANIA.

Personal.—Dr. William D. Ballinger, Lancaster, is seriously ill at his home as a result of a fall.——Dr. George A. Ickes, Altoona, is seriously ill with typhoid fever.——Drs. Julius H. Comroe, York, and Austin L. Hauslohner, Wilkes-Barre, have returned from Europe.

Contagious Diseases.—Scarlet fever is epidemic in Freeland and 80 cases have been reported recently to the board of health. Two new cases of smallpox were reported to the State Board of Health October 20, one from West Fairview and the other form Lebanon county.

Cocain Gang Broken Up.—Through the arrest of Clinton McAllister, Easton, 19 years old, the authorities believe they have captured the ring-leaders of "cocain sniffers" in that city. McAllister is said to have been selling the drug to young men and was arrested for stealing two bottles of cocain from a local drug store.

Officers Elected.—At the fifth annual meeting of the Seventeenth Censorial District Medical Society, held in Danville, September 4, the following officers were elected: President, Dr. Phillip C. Newbaker, Danville, and secretary, Dr. Luther B. Kline, Catawissa. All the counties making up the district, namely, Snider, Northumberland, Montour and Columbia, were represented. In response to an invitation tendered by the Northumberland County Medical Society, the association will meet in Sunbury in 1909.

Compulsory Vaccination Condemned.—Dr. Nathan C. Schaeffer, state superintendent of public instruction, in his annual report, submitted October 14, claims that conflicts between the provisions of the compulsory education and vaccination laws of the state keep thousands of children out of the public schools and that the hopes of those who endeavor to make vaccination general, have not come to pass. Ministers and Sunday school officers permit unvaccinated children to go to Sunday school and are therefore as much lawbreakers as the school officials who allow children to attend sessions when they can not produce certificates. He said that Dr. Samuel G. Dixon had ascertained that in 9,851 schools inspected there were 50,817 unvaccinated children in attendance. The total number of schools in this state is 33,171. These figures show that the hopes of those who framed the law excluding unvaccinated children from schools have not been realized. Legislation, which, through no fault of their own, makes children lawbreakers for the sake of getting an education, is very far from satisfactory. The dissemination of anti-vaccination literature is daily increasing the difficulties by which the schools are confronted and that fully 60 per cent. of all the letters sent to the educational commission bear on vaccination. The statistical portion of the report shows that there are 2,580 school districts in the state, 33,171 schools, 7,488 male teachers, 26,525 female teachers, 1,231,200 pupils, an increase of 6,812. The average number of pupils in daily attendance last year was 951,670.

Philadelphia.

Hospital Reports.—The report of St. Agnes Hospital for September shows that 190 patients were admitted to the institution.——The report of Mount Sinai Hospital for September shows that 60 patients were admitted to the house and that 1527 new patients were treated in the dispensary. The total visits to the out-patient department aggregated 428.

Health Report.—The total number of deaths reported to the Bureau of Health for the week ended October 24 reached 431, including 218 males and 213 females. This is an increase of 33 over the previous week, and an increase of 37 over the corresponding week of last year. The principal causes of death were: Typhoid fever, 7; scarlet fever, 6; pertussis, 3; diphtheria, 19; consumption, 63; cancer, 36; diabetes, 4; apoplexy, 14; heart disease, 40; acute respiratory disease, 47; enteritis, 42; hepatic cirrhosis, 6; appendicitis, 4; nephritis, 27; premature birth, 9; congenital debility, 6; senility, 9; suicide, 3; accidents, 10, and marasmus, 5. There were 200 cases of contagious disease reported with 32 deaths, as compared with 145 cases and 19 deaths reported in the previous week. Diphtheria heads the list with 104 cases and 19 deaths.——For the week ending October 17 there were 398 deaths, a decrease of 4 from the previous week and a decrease of 45 from the corresponding week last year. The principal causes of death were: Typhoid fever, 9; scarlet fever, 4; pertussis, 4; diphtheria, 6; consumption, 37; cancer, 18; diabetes, 5; apoplexy, 15; heart disease, 45; arteritis, 6; acute respiratory disease, 37; enteritis, 22; hepatic cirrhosis, 6; Bright's disease, 22; appendicitis, 4; congenital debility, 10; premature birth, 8; senility, 7; suicide, 6; accidents, 16; marasmus, 4. The death list included 207 males and 191 females. There were 145 cases of contagious disease reported with 19 deaths, as compared with 143 cases and 18 deaths reported in the previous week.

VERMONT.

Personal.—Dr. Alheric H. Bellerose, Rutland, has returned from Europe.——The house of Dr. Timothy G. Simpson, West Fairlee, was destroyed in a fire which burned the greater portion of the business section of the town. Dr. Simpson's loss is $2,000.

Vital Statistics.—The biennial report of the State Board of Health shows that in 1907 there were 7,981 births reported as compared with 7,881 in 1906; and 6,131 deaths as compared with 6,241 in 1906, the respective death rates per 1,000 being 16.27 and 17.93.

County Society Meets.—At the annual meeting of Washington County Medical Society, held in Barre, September 1, the following officers were elected: President, Dr. Michael F. McGuire, Montpelier; vice-president, Dr. Orlando G. Stickney, Barre; Alanson C. Bailey, Randolph; Myron L. Chandler, Dr. Louis A. Rushlow, Randolph; censors; Drs. Elliot B. Watson, Williamstown, and Joseph W. Jackson, Barre; and delegates to the state medical society, Drs. Orlando G. Stickney, Barre; Alanson C. Bailey, Randolph; Myron L. Chandler, Barre; and Edwin A. Colton, Montpelier.

State Society Meeting.—At the ninety-fifth annual meeting of the Vermont State Medical Society, held in Rutland, October 22 and 23, the following officers were elected: President, Dr. Charles W. Peck, Brandon; vice-president, Dr. Schuyler W. Hammond, Rutland; secretary, Dr. Clarence H. Beecher, Burlington (re-elected); treasurer, Dr. Bingham H. Stone, Burlington (re-elected); auditor, Dr. John H. Blodgett, Saxton's River (re-elected); and delegate to the American Medical Association, Dr. James N. Jenne, Burlington. The society took action against any member making a practice of doing work for a fraternal society or corporation below that charged for private services.

VIRGINIA.

Medical Colleges Open.—The Medical College of Virginia and the University College of Medicine, Richmond, opened for their annual session September 15.

Scarlet Fever.—The public school of St. Luke near Woodstock, was closed October 19, because of the prevalence of scarlet fever. A number of cases of the disease are said to be present at Saumsville.

Infectious Diseases.—During September there were reported to the medical inspector of Richmond, 66 cases of typhoid fever, 25 cases of diphtheria, 2 cases of whooping cough, and 1 case each of scarlet fever, chickenpox and mumps.

Epileptic Colony.—The Retail Merchants' Association, Lynchburg, has taken steps to secure the establishment of the proposed epileptic colony in Amherst County near Lynchburg, for which an appropriation for more than $40,000 has been made.

Personal.—Dr. Harry T. Marshall has returned from Manila and assumed charge of the department of pathology and bacteriology at the University of Virginia.——Dr. Carl Meloy has

been appointed adjunct professor of pathology at the University.——Dr. James D. Riddick has commenced his third term as mayor of Norfolk, and Dr. Southgate Leigh has been elected president of the common council.——Dr. John W. Ayler has been elected secretary of the Newport News Board of Health.——Dr. Robert T. McNair, Emporia, has been appointed city health officer.——Dr. Lomax Gwathmey, Norfolk, has recovered from a surgical operation, recently performed, and has returned to his home.——Drs. H. C. Maddux, Orange, T. B. Henderson, Wakefield, Philip S. Evans, and H. Norton Mason have been appointed members of the resident staff of Memorial Hospital, Richmond.——Dr. Robert S. Spillman, Norfolk, has been commissioned as captain and assistant surgeon, N. G. Va., and assigned to the Fourth Infantry.——Dr. Albert S. Priddy, Marion, is seriously ill with typhoid fever in Memorial Hospital, Richmond.

WASHINGTON.

Health Commissioners Organize.—Health officers and prominent members of the health departments of Tacoma, Spokane and Seattle met September 19, in Tacoma, and effected preliminary organization of the Health Officers Association of Washington. A committee, of which Dr. Elmer E. Heg, Seattle, is chairman, was appointed to draft a constitution and by-laws.

Rat Trappers.—The rat trappers employed by the health and sanitary department of Seattle report that in September 2,044 rats were captured, on which bounty was paid, and that the trappers in King County brought in 2,589 rats, making a total of 5,633. During the month, 21,452 traps were set; the poison squad used 905 pounds of bait and placed poison at 10,567 places.

Personal.—Dr. John Hunt, assistant medical inspector of Seattle, has resigned, and Dr. R. A. VanVorst has been appointed in his stead.——Dr. H. Eugene Allen, Seattle, has been appointed division surgeon of the Chicago, Milwaukee and St. Paul Railway, from the coast to the Columbia River.——Dr. William N. Keller, Tacoma, has been appointed local surgeon for the Chicago, Milwaukee and St. Paul Railway.——Dr. William A. Shannon, Seattle, has returned from Europe.——Dr. Spiro Sargentitch, health commissioner of Tacoma, has resigned and has started for Europe, and Dr. James R. Yokum has been nominated as his successor.——Dr. Christen Quevil and family, Tacoma, have started for Europe.

WISCONSIN.

College Opens.—The Wisconsin College of Physicians and Surgeons opened for its sixteenth annual session October 6. Dr. Emerson A. Fletcher delivered the opening address.

Diphtheria and Typhoid Fever.—Diphtheria is reported to be epidemic in Manitowoc.——Typhoid fever is said to be very prevalent in Kenosha, where more than 20 cases were reported last week.——A large number of cases of typhoid fever are reported in Sheboygan.

Personal.—Drs. F. L. Parsons, L. H. Novak and B. Novashelsky, internes at St. Mary's Hospital, Milwaukee, have resigned.——Dr. Thomas G. Walsh, Milwaukee, is reported to be critically ill with nephritis.——Great damage was done to the residence of Dr. Isaac N. Cohen, La Crosse, by fire, September 23.

Addition to Sanatorium.—An addition to cost $7,000 and accommodate twelve patients is to be added to Blue Mound Sanatorium through the generosity of Mr. Berthold Weinhagen, Milwaukee, who recently gave $3,000 to the sanatorium to be used for the construction of a building for boys suffering from tuberculosis.

GENERAL NEWS AND COMMENTS.

Coming Meeting.—The tenth annual meeting of the Ohio Valley Medical Association will be held at French Lick, Ind., November 11 and 12, under the presidency of Dr. J. Leaming Wiggins, East St. Louis, Ill. The annual address will be delivered in the evening of the first day by Dr. G. Frank Lydston, Chicago, on "The Psychology of Graft."

Railway Surgeons Meet.—At the fifth annual meeting of the American Association of Railway Surgeons, held in Chicago, October 14, 15 and 16, the following officers were elected: President, Dr. Joseph R. Hollowbush, Rock Island, Ill.; vice-presidents, Drs. Benjamin Thompson, Tama, Iowa, G. W. Thompson, Winamac, Ind., and Oscar LeSeure, Detroit, Mich.; secretary-treasurer, Dr. Henry B. Jennings, Council Bluffs, Iowa, and editor, Dr. Louis J. Mitchell, Chicago.

Cholera in the Philippines.—The public health reports from Manila under date of September 2, show that for the week ended August 29, 20 cases of cholera were reported in the city, with 16 deaths. In the provinces during the same week 1,103 cases were reported, with 686 deaths. Press telegrams under date of October 25, from Manila, state that for the week ended on that day, 7 new cases of cholera were reported in Manila, the increase in number being ascribed by the authorities to the gatherings of the people on the streets Saturday nights and Sundays, at feasts and cock-fights.

Warning Concerning Apparatus Salesman.—The Scheidel-Western X-Ray Coil Company, Chicago, states that a former salesman of theirs, G. W. Wells, is imposing on physicians in Texas and other parts of the South. The company states that he no longer represents them in any capacity, but that he has borrowed money from physicians in the company's name and has not repaid it. Mr. D. L. Hensell, Greenville, sheriff of Hunt County, Texas, also writes to THE JOURNAL that he holds a capias for this G. W. Wells, for swindling, and that he will appreciate prompt notification of Wells' whereabouts.

Alaska-Yukon-Pacific Exposition.—During this exposition to be held in Seattle in 1909, the following exhibits illustrating modern appliances and methods of treatment and the value of sanitary laws and practical hygiene will be made by the Public Health and Marine-Hospital Service. The surgical section will consist of a model operating room, showing a surgical operation in progress, with sterilizers, surgical armamentarium and other appurtenances. The laboratory section will contain various apparatus used in the hygienic laboratory in the solution of public health problems. The hospital section will comprise a record room and a model ward. The tuberculosis exhibit will consist of a model of the sanatorium of the Service at Fort Stanton, N. M. The quarantine section will include a model detention camp intended for use in time of epidemic, a model quarantine station and disinfecting machinery. The *x*-ray section will be installed in a room constructed for the purpose. Two modern coils are to be shown, including *x*-ray tubes and fluoroscopes, high-frequency apparatus and various accessories.

Insects as Disease Carriers.—Dr. L. O. Howard, chief of the Bureau of Entomology, Department of Agriculture, writes in commendation of our editorial of August 22, on "The National Farm Commission and Rural Sanitation," and encloses two pamphlets which show what his bureau has been doing in this direction. The first, Farmers' Bulletin 155, entitled, "How Insects Affect Health in Rural Districts," which has been in print for seven years, and of which many thousands of copies have been sent out to farmers, is a plain account of the agency of mosquitoes in the spread of malaria and of house flies in propagating typhoid, with instructions as to the best methods of destroying and preventing the multiplication of these insects. The other pamphlet, Circular 71, on the house fly, describes the various flies which infest the house and gives the proper method of prevention. Both pamphlets are eminently practical in their treatment of the subject and deserve to be more widely distributed and more carefully studied, not only by the people of the rural districts, but also by those of all other communities where these pests are still found.

CANADA.

Aid to Fight Tuberculosis in Montreal.—On his return from the Washington conference where he met Mr. Henry Phippe, founder of the Tuberculosis Institute, Philadelphia, and as a direct result of conversations with that gentleman and personal investigations, Lieut.-Col. Burland of Montreal has donated $50,000 to the Montreal League for the Prevention and Treatment of Tuberculosis. In the heart of Montreal, Colonel Burland has presented a building for dispensary purposes and the donation of $50,000 is given on the condition that the league raises an endowment of a similar amount. In addition to a day dispensary the institution will have about 20 beds for emergency cases, also wide verandas, sun parlors, and a roof garden. The building is to be a memorial to the father and mother of the donor.

British Columbia Campaign Against Tuberculosis.—British Columbia is to teach its school teachers and school children as to the modern methods of combating tuberculosis. Two pamphlets have been recently issued and distributed broadcast throughout the province. The government of British Columbia is displaying an enterprise unequalled in any other province in the Dominion. The pamphlet for the children is written in juvenile style, intelligible by them, and highly instructive. Along with the advice to the children are two dozen "Don'ts." The statistics as regards tuberculosis in Canada are set out in these words: "In Canada, statistics show that 8,000 lives are annually sacrificed from this preventable cause. That, at

a very low estimate, at least 40,000 individuals, annually, become infected with the disease. That the consequent economic loss to the state, by these deaths, is $48,000,000; and the further loss, through reduced productiveness of the infected, is $24,000,000; making a grand total annual loss to the finances of the country of no less than $72,000,000."

New Provincial Medical Association.—The Manitoba Medical Association was organized at Winnipeg October 8. About 200 members of the association were present at a dinner on that evening, at which Dr. H. H. Chown, Winnipeg, delivered a stirring address on "The Necessity of Greater Effort on the Part of the Medical Profession to Combat the Encroachments of Tuberculosis." He emphasized the necessity of a greater effort on the part of the profession in Manitoba to combat the encroachments of tuberculosis, and strongly criticised the provincial authorities for their dilatoriness in establishing a sanatorium. Manitoba, he said, was to-day one of the most backward portions of the civilized globe in the fight against consumption. Dr. Gordon Bell of the Manitoba Medical College detailed the history of the movement for a sanatorium in the province, and explained the reason why progress in securing the institution had been so restricted. The following officers were elected: President, Dr. James R. Jones, Winnipeg; vice-presidents, Drs. John A. Macdonald, Brandon, and Dr. James R. McRae, Neepawa; honorary secretary, Dr. Jasper Halpenny, Winnipeg; honorary treasurer, Dr. Kenny, Winnipeg; executive committee, Drs. Harvey E. Hicks, Griswold; Daniel G. Ross, Selkirk; F. S. Keele, Portage la Prairie; Harry M. Speechly, Pilot Mound; and William J. Harrington, Dauphin; and auditors, Drs. Robert J. Blanchard and Arthur W. Moody, Winnipeg. The majority of physicians of standing throughout the province have registered as members or have signified their intention of so doing.

Insane in Ontario.—A pamphlet has been recently issued by the Ontario government on the insane in Ontario, immigration and deportation of defectives and statistics relating thereto. On Dec. 31, 1907, there were in the Ontario hospitals for the insane, exclusive of a private institution at Guelph, 5,315 insane persons and 775 idiots and feeble-minded. The males were 2,931; females, 3,159. The net increase for the year was 118. The revenue collected from the paying patients during the year amounted to $166,419.63. The daily average number of patients in the provincial hospitals during the year was 6,053; the total number of admissions, 1,162, of which number 262 were admitted to the Toronto Hospital; the total number of discharges during the year was 537; discharged recovered, 312; improved, 177; unimproved, 48. On May 1 a new hospital was completed at Penetang with accommodation for 120 patients. An important change will come into effect by the first of the year whereby the infirmaries at the London and Hamilton institutions will be set apart for the segregation and treatment of acute cases of insanity where complete hydrotherapeutic and hot air equipments will be installed. In the other hospitals, wards are being set apart for the treatment of acute cases. In the Ontario hospitals for the insane there are approximately 196 tubercular cases, 76 male and the balance female. In most of the hospitals special efforts are made to segregate these cases. At the Hamilton Hospital a separate building is in course of construction for them. It will accommodate 10 male and 10 female patients. In 1906, 19 persons were deported. During 1907, 87 were deported, representing a saving to the province of about $350,000. At least 25 have been sent back to their native countries up to the present time this year. Dr. C. K. Clarke of the Toronto Hospital states in his report that of the 262 persons admitted in 1907, less than half were Canadians.

FOREIGN.

Spanish Antituberculosis Congress.—The first tuberculosis congress held in Spain convened at Saragossa early in October, with a brilliant assemblage of authorities on hygiene and preventive medicine. The meetings were held in the opera house, the prime minister presiding; they were marked with great enthusiasm. The *Siglo Medico* is publishing the transactions in detail.

First International Congress of Urology.—The international Urologic Association was founded to combine anatomists, physiologists, physicians, surgeons and chemists for cooperation in the study of a single organ, hoping to unite those who can throw light on the pathologic problems of the urinary apparatus. The restriction of membership and of the discussions to certain themes given out long in advance has confirmed anew the wisdom of this plan, also adopted by the International Surgical Congress. The Urologic Congress was held at Paris, September 30 to October 4, with Albarran, Posner and Watson of Boston, as presiding officers, and 150 members in attendance. Each address had been published and was in the hands of the members, with a summary in four languages, and the discussions commenced at once, as the author merely read the summary. The next congress will be held three years from now, in London, and the subjects appointed for discussion are: "Resection of the Bladder"; "Prostatectomy," and "Phosphaturia and Oxaluria." The officers elected to preside at the next congress are Fenwick of London, Koranyi of Budapest and Pousson of Bordeaux. The questions discussed at the recent meeting were: "Pathogenesis and Treatment of Anuria"; "Retention in the Bladder without Mechanical Obstacle"; "Normal and Pathologic Physiology of the Prostate," and "Operative Indications in Tuberculosis of the Kidneys." The common study of physiology of the prostate has provided a groundwork for fruitful discussion of prostatectomy at the next meeting of the congress. The possibility of nervous inhibition of bladder functioning was sustained by Albarran and others as explaining many cases of vesical retention, even when there is likewise slight mechanical obstruction, as the retention is liable to persist after removal of the obstruction. Bazy has observed cases in which the retention was the result of autosuggestion, and could be cured by countersuggestion. Frank cited cases of voluntary, practically professional retention. Retention from polyuria is liable also to cause nervous inhibition. In regard to anuria, the consensus of opinion seemed to be that much further study is required from both physicians and surgeons to determine better the indications for operative treatment or abstention. Achard, in his review of the congress in the *Semaine Médicale*, quotes one of the members as saying that the results of operative treatment of anuria to date have "poured a little water in the wine of the surgeons." Early nephrectomy, on the other hand, was generally recognized as the only effectual treatment of tuberculosis of the kidneys, Desnos remarking that it is "always too late for an operation for a cancer in the kidney, but never too late in case of renal tuberculosis." The physicians present sustained the surgical view of renal tuberculosis—an important outcome of the deliberations of the congress.

LONDON LETTER.

(From Our Regular Correspondent.)

LONDON, Oct. 17, 1908.

Cancer Research.

The "Third Scientific Report" of the investigations of the Imperial Cancer Research Fund has just been issued by Dr. Bashford, general superintendent of the work and director of the laboratory. It is a record of a vast amount of patient experiment and observations. The first report of the Fund was published in the spring of 1904, the second a year later; so that the present volume is the outcome of more than three years' silence, during which work has been continuously conducted in the laboratories. The nature of the connection between the irritation and the disease has received much attention from the investigators acting for the fund. A wide study of cases of cancer has shown that the hypothesis of a congenital or embryonic origin of cancer is incorrect. Thus cancer of the skin of the abdomen is practically unknown in Europe, but common in Kashmir. This is not due to any special presence of embryonic germs in the skin of the abdomen of the Kashmiris, but to its irritation by wearing a charcoal oven around the waist. Again, cancer of the floor of the mouth is rare in European women, although not uncommon in men; but in India women suffer from it in high degree. The difference is due to the fact that Indian women chew betel nut and sleep with the plug in the cheek at the exact spot where cancer starts. In needle-women melanotic sarcoma often develops in the fingers at the site of frequent puncturing by the sewing needle. Belief in the congenital origin being abandoned, the question of heredity is discussed. The most recent returns of the registrar-general show that in 1906 out of a total of 141,241 deaths of males above the age of 35, 12,695 were due to cancer, and that out of a total of 140,607 similar deaths of females, 17,671 were due to cancer. The duration of human life and the small number of descendants from each pair render a trustworthy statistical inquiry in man impossible at present. But this difficulty can be obviated in short-lived animals. In the mouse the question is in a fair way of being settled by means of breeding and in-breeding experiments on a large scale. As yet no evidence has been obtained that cancer has been increased by in-breeding, and the hypothesis of special inherited liability, although not disproved, is much weakened.

A Municipal Sanatorium for Consumption.

The first municipal sanatorium for consumption in England has been opened by the lord mayor of Birmingham. It is situated on the side of the Cotswold Hills, 3 miles from Cheltenham. Some time ago the Birmingham city council purchased an estate for $85,000 and built on it 40 chalets and two blocks to accommodate 40 patients at a cost of $36,000. The site is 800 feet above the sea level, is well sheltered and has an area of 30 acres. It is estimated that there are in Birmingham about 2,000 persons suffering from tuberculosis of the lungs, of which a large number are too far advanced to benefit by treatment. Assuming that all the beds are occupied, the annual cost of maintenance of the sanatorium will be $15,000, or $7.50 a bed weekly, exclusive of interest and sinking fund charges.

Admission of Women to the Royal College of Surgeons.

The long struggle of women for admission to the Royal College of Surgeons has at last been crowned with success. As stated in a previous letter to THE JOURNAL, a poll was taken of the fellows and members of the college on the question of admission of women. A majority of the fellows voted in favor of admission and a majority of the members against it, and there was a small majority of the total against admission. The Council has now decided, however, to admit women both to the membership and the fellowship examinations.

PARIS LETTER.

(From Our Regular Correspondent.)

PARIS, FRANCE, Oct. 8, 1908.

Military Service and Erroneous Diagnoses of Heart Disease.

The Academy of Medicine opened day before yesterday with a communication from Dr. Huchard on erroneous diagnoses of heart disease and their consequences on the recruiting of the military service. Before the councils of revision the least palpitations of nervous or gastric origin, intermittent heart action, or smokers' pseudo-angina pectoris, and extracardiac murmurs are invoked as reasons for exemption from military service. These are often only temporary affections. They are particularly frequent among young people of fifteen or twenty years. There is a tendency to attribute to hypertrophy of the heart what really is merely an underdevelopment of the thoracic cavity compared with the heart. Without reflecting on the competence of our military physicians, Dr. Huchard says that for lack of the time, the quiet and even of the instruments necessary to examine each individual, they are unable to make delicate diagnoses. Thus, to the injury of the service, many young men are invalided for heart disease when they really have no lesion. Sometimes, moreover, such errors may do an injury to the subject of examination himself, as in the cases of a student at the military school at St. Cyr and an officer of engineers whose careers were checked by diagnoses of heart disease which were afterward shown to be erroneous.

Dr. Huchard concludes that, in place of invaliding finally offhand in cases of suspected hearts, it would be preferable to grant a respite to such patients and to submit them to re-examination every three years, for example, until the age of 45.

Yellow Fever in a French Port.

Yellow fever has been declared at Saint-Nazaire. It was brought by the packet *La France*, which arrived on September 26 from the Antilles. The packet had touched on September 10 at Fort-de-France, where yellow fever was raging. Nevertheless, it was admitted to free pratique (privileges of the port) without any precautions. Eight persons have been stricken; three have succumbed and two are dying. The population is much incensed against the sanitary officers who admitted the packet to the port.

A Future Museum of the Public Charities.

The hospitals of Paris and the various establishments which belong to the public charities (the central pharmacy, the central storehouse, etc.) contain a great number of works of art, furniture, pictures, curiosities, old pieces of artistic faience, which are at present scattered about almost everywhere, but which would be interesting if assembled in some place accessible to the public. The present director of the "Assistance Publique," M. Mesureur, is engaged in organizing a museum of this nature. It is intended, moreover, to join to it a library, for the archives contain magnificent collections, comprising some very valuable illuminated parchments.

BERLIN LETTER.

(From Our Regular Correspondent.)

BERLIN, Oct. 1, 1908.

Organization of the Medical Profession in Germany.

The medical councils in the other German states differ in some respects from those of Prussia, described in my letter in THE JOURNAL [October 10, page 1246.] In some of the federated states there was too much opposition to the organization of courts of honor, and none has been established in Würtemberg, Hesse, Bavaria, Hamburg and Elsass-Lothringen, while Saxony, Baden, Oldenburg, Anhalt, Braunschweig, Schaumburg and Lübeck possess them. None of the other German states has as yet this official organization of the profession in medical councils and courts of honor.

Private Organization of the Profession.

Besides the above public organizations, there are throughout the empire what are called medical professional unions "Standesvereine," each one organized in its own way like any private society. These organizations have united to form smaller or larger associations; thus in Berlin there are two large societies of this kind, the Berlin Medical Standesverein and the Berlin Medical Vereins-Bund. There are similar combinations in the various states, in Hesse, for instance, the National Medical Landesverein, etc.

THE "AERZTEVEREINSBUND."

Almost all the public and private organizations are united in the national German Medical Association, the "Aerztevereinsbund," which was organized in 1873 and now comprises 386 societies with about 23,000 members, thus including nearly all the physicians of Germany. This national "Aerztevereinsbund" was organized—according to its statutes—for the purpose of uniting the various public and private medical associations for mutual encouragement and organized action in the field of the scientific, practical and social relations of the medical profession. It is governed by a board of managers who appoint their own president. This year the president is Professor Löbker of Bochum. The Aerztevereinsbund meets once every year and then takes up business previously arranged.

THE LEIPSIC LEAGUE.

Still another national association was organized a few years ago to promote the material interests of the profession. it is popularly called the "Leipsic League," as its headquarters are at Leipsic. Its president is its founder, Dr. Hartmann of Leipsic, and it has now about 21,000 physicians enrolled. The aim of this society is to link together the German physicians for improvement of their economic condition, and especially to support such colleagues as have suffered, or, it is to be feared, will suffer, material loss in defending the interests of the profession against the *Krankenkassen* and similar corporations for insurance against sickness. The importance of this league in the conflicts constantly arising in relation to contract practice, has been frequently mentioned in THE JOURNAL. Its official title is the "Verband der Aerzte Deutschlands zur Wahrung ihrer wirthschaftlichen Interessen."

VIENNA LETTER.

(From Our Regular Correspondent.)

VIENNA, Oct. 14, 1908.

Health of Vienna.

In spite of the unsettled weather of the summer months, the health of Vienna was exceptionally good; in fact, the best since records have been kept (1857). While the normal mortality for summer has been calculated at 17.4 per thousand, the figure has considerably decreased for 24 years, since the new waterworks and drainage have been completed. This summer beats all preceding years, with a mortality of only 13.8 per thousand. The morbidity as well was markedly lower than at any time before. There were only 3,090 cases of infectious diseases recorded during the three months of July, August and September, with an estimated population of 2,025,000. Diphtheria and cholera infantum were a little more frequent but the epidemics were mild. Asiatic cholera has hitherto been warded off in spite of the intimate commercial relations between Russia and Vienna. There were only 20 days free from rain during the 92 summer days, and only 280 hours of sunshine, while the mean temperature was too low by 3 C. (5.4 F.). One would have expected to find the health, under these repeatedly unfavorable weather conditions, at least as bad as at any preceding corresponding period, if not worse. But it seems that other factors, intelligence of the population, sanitary precautions, etc., must be taken more into consideration than hitherto has been done.

Pharmacology

BLENZ'S REMEDY.

A New Modification of an Old Trick.

Reaching the "patent-medicine"-taking public via the family physician has long been a classic procedure on the part of the nostrum manufacturer; reaching the laity through the officially appointed officers of health is the latest modification or extension of the older dodge. In a "form" letter addressed "To County Physicians," Blenz & Co., of Decatur, Illinois, "take the liberty to address you in reference to our Remedy," which "checks all diseases and all tendency to disease and returns the person to perfect health."

Here are a few of the pathologic conditions in which Blenz's Remedy is declared to be indicated:

Blood Poison.	Kidney Disorders.
Asthma.	Rheumatism.
Fevers, all kinds.	Women's Diseases.
Dyspepsia.	Cancer.
Catarrh.	Piles.
Neuralgia.	Pneumonia.
Syphilis.	Tuberculosis.
Gonorrhea.	Smallpox.
Coughs, Colds.	Malaria.

To head off any purchaser, however, who might feel that he was not getting his money's worth, we are told that "Blenz's Remedy not only moves (sic) the diseases mentioned in this circular, but all others incidentally thereto." Surely a valuable preparation to keep around the house. Should you be suffering from palpitation, paralysis or piles "take 5 or 10 grains after each meal" of Blenz's Remedy. "After the relief is obtained continue using for ten days so as to move every germ from the system." When the last germ has regretfully taken its departure, you may feel safe—but not before, because "the germs entering the system through the stomach are the shifters of life," and no one is desirous of having such an essential thing as life shifted. In fact, as Blenz tells us, "every person desires to look as well as they can"—a sentiment whose principle is as sound as its expression is grammatically unstable.

Without having given the "remedy" a clinical trial, but basing our conclusions purely on the description and claims so picturesquely set forth in the advertising, we may concede its potency in at least one condition. At $10.00 a pound—the price asked—it seems beyond dispute that in the administration of this remedy the congested condition of a plethoric pocket-book would find immediate relief.

In a burst of rhetorical imagery and mixed metaphor, we are told that "the Body is the Theater of Disease where the drama of Life is actually played." From the pamphlet furnished, we gather that this theater is under the exclusive management of Blenz & Co., who furnish the interior decoration—for a consideration. Whether or not life is a drama is open to question; when we think of the business which this firm is engaged in, we incline to the belief that existence approaches farce-comedy, in which the physician plays the part of the unsophisticated ruralite and the nostrum exploiters assume the rôle of the "green-goods" man.

PHARMACOPEIA TRUSTEES MEET.

A meeting of the Board of Trustees of the United States Pharmacopeial Convention was held at Hot Springs during the 1908 meeting of the American Pharmaceutical Association.

It was announced that the United States Public Health and Marine-Hospital Service will issue bulletins of comments on the Pharmacopeia. M. I. Wilbert, Philadelphia, and M. G. Motter, Washington, have been appointed technical assistants in the Pharmacological Division of the Hygienic Laboratory and will take this work up, beginning October 1. A vote of thanks was tendered Surgeon-General Wyman for this action and it was decided to discontinue the preparation of a digest of comments under the Committee of Revision. Joseph P. Remington was made a committee of one to prepare for the council of the American Pharmaceutical Association a set of resolutions relative to the above mentioned work by the Marine-Hospital Service. It was decided to secure authentic data under official seal as to the date of incorporation of the several organizations and institutions entitled to representation in the United States Pharmacopeia Convention of 1910. Chairman J. P. Remington, of the Revision Committee, submitted page proofs of the Spanish translation of the Pharmacopeia. The retail price was fixed at $5.00 for the cloth-bound volume.

THE NATIONAL FORMULARY.

The American Phamaceutical Association has a standing committee on the National Formulary which supervises the compilation of this valuable work. This committee reports that it is actively engaged in revising the book and that efforts are being made to raise the standard. Several of the general recommendations made by the committee of the American Pharmaceutical Association are indicative of this. They are, in brief, as follows:

Titles and synonyms of substances not official should conform to modern ideas of chemistry.

Titles should be descriptive of the true composition of the preparations.

The introduction of therapeutic or anatomic names should be prohibited in future, and the present therapeutic titles in the National Formulary should be eliminated so far as is practical.

Trademark names should not be introduced among the titles.

While the general tenor of the committee's report indicates that the forthcoming book will be a vast improvement over the present one, it is also evident that the committee is inclined to include any formula which it thinks physicians would want. It is to be hoped, therefore, that during the coming year medical societies and individual physicians will interest themselves in this matter and indicate their disapproval of the inclusion of worthless and unscientific mixtures, which often are poor imitations of worthless proprietaries. The present book contains formulas of the shot-gun variety that should no longer have recognition. The inclusion of these formulas in the past may be excused because they were offered as substitutes for the secret and semi-secret proprietaries so much used by many physicians. But a change has taken place; fewer of these nostrums are used by physicians and this should be recognized. There is no longer excuse for such formulas in a book so important as the National Formulary.

SULPHITE IN ADNEPHRIN SOLUTION (STEARNS).

Report of the Council on Pharmacy and Chemistry of the American Medical Association.

The following report was presented to the Council by a subcommittee:

The various commercial brands of suprarenal alkaloid differ from each other (1) in the proportion of active principle, (2) in the nature of the acid with which the alkaloid is combined, and (3) in the nature of the substance which is added to retard oxidation, and consequent deterioration, of the solution. While the relative physiologic activity of the preparations is doubtless the most essential point of difference, the nature of the preservative may, under special conditions, also be important, and should be known by the physician, and therefore should be stated by the manufacturers.

There are four suprarenal preparations prominently before the profession of this country, all of which have been accepted by the Council on Pharmacy and Chemistry. Two of these are said by their manufacturers to contain sulphite; the other two are presumed not to contain this preservative, as there is nothing to indicate it either on the label or elsewhere. It being reported to the Council that one—Adnephrin Solution (Stearns)—of the latter two contained sulphite, the Association's laboratory was requested to examine this preparation to determine the matter.

The report from the laboratory, which follows this report, shows that Adnephrin Solution (Sterns) contains sulphite and does not, therefore, comply with the present rules of the Council. As a specific declaration of the presence of preservatives, however, was not formerly required, the product was not in conflict with the rules in force at the time of its acceptance. In view of this, it was recommended that in future editions of the N. N. R. (New and Nonofficial Remedies), it be indicated that Adnephrin Solution (Stearns) does not comply with the new rules of the Council.

In submitting this report, and the findings of the chemical laboratory given below, the subcommittee held that the identity of the preservatives in preparations of suprarenal alkaloid, especially of sulphite, should be known, and it therefore recommended their publication. The report was adopted by the Council and, after submission to Frederick Stearns & Co., was ordered published.

W. A. PUCKNER, Secretary.

THE PRESENCE OF SULPHITE IN COMMERCIAL SOLUTIONS OF SUPRARENAL ALKALOID.

[CONTRIBUTION FROM THE CHEMICAL LABORATORY OF THE AMERICAN MEDICAL ASSOCIATION.]

W. A. Puckner and W. S. Hilpert.

In response to the request of the Council, Adnephrin Solution (Stearns) was examined to determine the presence or absence of sulphite. As a check on the work the three other preparations of suprarenal alkaloid which have been accepted by the Council were tested in connection with Adnephrin. Two of these preparations contain sulphite, but this openly stated by the manufacturers. Nothing is said of the presence of sulphite in the third preparation, and the tests demonstrated the absence of this preservative.

TESTS.

Three samples of Stearns' Adnephrin Solution were purchased in the open market and qualitatively examined and found in each case to contain sulphite.[1]

Specimen 1, on examination,[2] was found to contain sulphite corresponding to 0.34 gm. anhydrous sodium sulphite to 100 c.c. adnephrin solution. As a check on this estimation, the total sodium and total chlorids were estimated,[3] confirming the sulphite determinations.

In Specimen 2, the sulphite content was equivalent to 0.28 gm. anhydrous sodium sulphite to 100 c.c. of Adnephrin Solution, corresponding with the estimation made on Specimen 1. To prove this further, the sulphate, present as such, and the total sulphate after oxidizing the sulphite to sulphate were determined, resulting in figures which demonstrated the correctness of the sulphite estimations.[4]

1. The qualitative test for sulphite is the one proposed in Bulletin No. 107, p. 187, U. S. Department of Agriculture. The test is based on the property of sulphites being reduced, by the action of nascent hydrogen, to sulphids, which are then tested for.

2. The quantitative estimation of sulphite used was made by the method suggested in the above mentioned bulletin, p. 187. By this method the sulphite is treated with phosphoric acid and the liberated sulphur dioxid distilled into tenth-normal iodin and the sulphite determined by residual titration by thiosulphate. Five c.c. Adnephrin Solution treated according to the above method consumed (a) 2.66 c.c. tenth-normal iodin and (b) 2.73 c.c. iodin, averaging 2.69 c.c., which is equivalent to 0.0167 gm. sodium sulphite. The pipette delivered 4.9916 gm. solution, of specific gravity of 1.015, thus making the sodium sulphite content 0.34 gm. per 100 c.c. of solution.

3. The total sodium was determined by converting the sodium present to sodium sulphate and weighing as such. Thus 4.9916 gm. solution yielded 0.0734 gm. sodium sulphate and 10.0896 gm. solution yielded 0.1491 gm. sodium sulphate, averaging 1.47 gm. per 100 c.c. The chlorids were determined as silver chlorid and calculated to sodium chlorid, in a solution of which the Adnephrin is dissolved. Thus 0.6155 gm. solution yielded 0.0144 gm. silver chlorid and 0.5380 gm. yielded 0.011 gm. silver chlorid. The average of the two estimations calculated to sodium chlorid equals 0.85 gm. sodium chlorid per 100 c.c. of the Adnephrin Solution. The sodium sulphite calculated to sulphate equals 0.38 gm. per 100 c.c., leaving 1.09 gm. of the 1.47 gm. sodium sulphate per 100 c.c. to be calculated to sodium chlorid; this figure is 0.90 gm. per 100 c.c., agreeing with the direct chlorid estimation, i. e., 0.85 gm. per 100 c.c.

4. The sulphite was determined in the same way as the first determination. Thus 4.9790 gm. Adnephrin Solution consumed (a) 2.27 c.c. iodin and 4.9872 gm. consumed (b) 2.24 c.c. iodin. The average of the two estimations calculated to sodium sulphite was found to be 0.28 gm. per 100 c.c. As a check the quantity of sulphate and the sulphate after oxidation by bromin were determined. Thus 4.8879 gm. Adnephrin Solution yielded 0.152 gm. barium sulphate and 4.9808 gm. solution yielded 0.0159 gm. barium sulphate. The average of these estimations calculated to sodium sulphate is 0.19 gm. per 100 c.c. of Adnephrin Solution. After oxidation the total sulphate was estimated, yielding the following results: It was found that 1.6519 gm. Adnephrin Solution yielded 0.144 gm. barium sulphate equivalent to 0.53 gm. sodium sulphate per 100 c.c. The sodium sulphate, present as such, subtracted from the total sulphate found after oxidizing the sulphate, leaves the figure 0.32 gm. per 100 c.c. to be calculated to sodium sulphate, yielding the figure 0.25 gm. per 100 c.c., agreeing with the results of direct sulphite estimation.

From the results of the above estimations, Stearns' Adnephrin Solution was demonstrated to contain sulphite equivalent to approximately 0.3 gm. sodium sulphite to each 100 c.c. of the solution.

Action of Brucin.

Brucin is usually supposed to have an action similar to, but weaker than that of strychnin. W. E. Dixon and W. H. Harvey (*Pharmaceutical Journal*, Sept. 19, 1908, p. 367) find from investigation that brucin resembles methyl-strychnin more nearly than strychnin. Its action is closely allied to that of curare. While strychnin produces marked convulsions, those produced by brucin are never very violent or severe and quickly pass off. Strychnin causes death by spasm of the respiratory muscles and there is very rarely any evident paralysis. Brucin causes death in the same way as curare and methyl-strychnin, by paralysis of the motor nerve endings. The toxicity of brucin compared with strychnin is shown by a series of experiments on mammals to be in the relation of four to thirty-three.

Correspondence

Lucian's Estimate of the Physician.

PITTSBURG, PA., Oct. 17, 1908.

To the Editor:—Lucian, the great cynic and critic of the second century, in his essay entitled "Disinherited," makes the physician who had been disinherited for the second time because of his inability to cure his stepmother of madness protest in the language of the passage quoted below against the coercion which was used on him. It may be supposed that this passage reveals Lucian's own estimate of the dignity of the calling of the physician. It is well worth reading to-day.

"But the members of the medical profession should be left still more to their own discretion than other artists, in proportion to the greater nobility of their aims and usefulness of their work. This art should have a special right of choosing its objects; this sacred occupation, taught directly from Heaven, and pursued by the wisest of men, should be secured against all compulsion, enslaved to no law, intimidated and penalized by no court, exposed to no votes or paternal threats or uninstructed passions. If I had told my father directly and expressly: 'I will not do it, I refuse the case, though I could treat it; I hold my art at no man's service but my own and yours; as far as others are concerned, I am a layman'—if I had taken that position, where is the masterful despot who would have applied force and compelled me to practice against my will? The appropriate inducements are request and entreaty, not laws and browbeating and tribunals; the physician is to be persuaded, not commanded; he is to choose, not be terrorized; he is not to be haled to his patients, but to come with his own consent and at his own pleasure; governments are wont to give physicians the public recognition of honors, precedence, immunities and privileges; and shall the art which has state immunities not be exempt from the *patria potestas?*"

THEODORE DILLER.

A National Department of Health.

Chicago, Oct. 19, 1908.

To the Editor:—The editorial, "President Roosevelt and a Department of Public Health," published in THE JOURNAL, October 17, while valuable in certain respects, is to my mind misleading in other directions, due principally to unintentional oversight, no doubt, or omission to include other interesting details. If you would kindly refer to the platforms of at least four of the national parties, then compare and publish same, etc., some of us would be more enlightened on this subject. In other words, do not leave unsaid or unpublished that which might with equal propriety and dignity appear in an editorial. While this measure, or campaign on this one particular subject, is non-partisan in so far as it relates to the welfare and the happiness of the American people, and the

desirability of obtaining a Department of Health, yet, personally, I may be permitted to state that my political affiliations are with the Republican party. Yet this party's plank in the matter of a Department of Health, to my mind, is misleading or quite ambiguous, to state it mildly, or, as Dr. Gould pointed out a few months ago in *American Medicine*, "it is an insult to the medical profession" (or words to this effect). Then, too, the Democratic party in its platform refers to "advocating a "Bureau of Public Health," while the Independence party frankly advocates "the creation of a national Department of Health with a member of the medical profession at head of it," etc. The Socialist party, in its platform (if I recollect correctly), advocates practically the same measure. It seems to me that the sentiment of the medical profession is quite unanimously crystalized on the desirability of having a national Department of Health with a medical scientist in the Cabinet, and not a "Bureau of Public Health," and nothing said about a physician in the Cabinet. I am not aware that either President Roosevelt or Mr. Taft nor the able Committee of One Hundred have thus far decided for this proposed new department with a physician in charge of this projected new portfolio. I am greatly pleased to learn that many in our profession who formerly opposed this measure now endorse it. As above stated, as I understand, the crystallization of sentiment of the members of the American Medical Association favors "a Department (not a bureau) of Public Health" with an efficient and able hygienist—a medical man—in the President's official family. In just ethical criticism we learn much.

LISTON HOMER MONTGOMERY.

Association News

Standing and Special Committees.

The following is a list of the standing and special committees that have been appointed or added to by President Burrell since the Chicago session of the Association:

COMMITTEE ON MEDICAL LEGISLATION.—Dr. George W. Gay, Boston, has been appointed in place of Dr. Charles Harrington (deceased). Therefore, the committee now stands: Dr. Charles A. L. Reed, Cincinnati, Chairman; Dr. Charles S. Bacon, Chicago, and Dr. George W. Gay, Boston.

BOARD OF PUBLIC INSTRUCTION ON MEDICAL SUBJECTS.—Dr. George W. Crile, Cleveland, Ohio, has been appointed in place of Dr. L. Emmet Holt (term expired), and Dr. Myles Standish, Boston, in place of Dr. Charles Harrington (deceased). The other members of the Board are Dr. John G. Clark, Philadelphia, Chairman; Dr. F. F. Simpson, Pittsburg, Pa.; Dr. Frank Billings, Chicago; Dr. L. S. McMurtry, Louisville, Ky., and Dr. Howard A. Kelly, Baltimore.

COUNCIL ON DEFENSE OF MEDICAL RESEARCH.—Dr. W. B. Cannon, Boston, Chairman; Dr. Joseph A. Capps, Chicago; Dr. Harvey Cushing, Baltimore; Dr. David L. Edsall, Philadelphia; Dr. Simon Flexner, New York City; Dr. Reid Hunt, Washington, D. C.; Dr. H. C. Moffitt, San Francisco.

COMMITTEE ON TRANSPORTATION AND PLACE OF SESSION.—Dr. M. L. Harris, Chicago, Chairman; Dr. W. A. Jayne, Denver; Dr. Kenneth A. J. Mackenzie, Portland, Ore.; Dr. W. D. Haggard, Nashville, Tenn.; Dr. E. Eliot Harris, New York City.

COMMITTEE ON ELABORATION OF PRINCIPLES OF ETHICS.—Dr. F. C. Shattuck, Boston, Chairman; Dr. George W. Guthrie, Wilkes-Barre, Pa.; Dr. Stuart McGuire, Richmond, Va.; Dr. Charles R. Bardeen, Madison, Wis.; Dr. C. A. Powers, Denver.

CONFERENCE COMMITTEE ON DRUG REFORM.—Dr. Lewis S. McMurtry, Louisville, Ky., Chairman; Dr. D. R. Silver, Sidney, Ohio; Dr. J. Forrest Burnham, Lawrence, Mass.

COMMITTEE ON PATENTS AND TRADEMARKS.—Dr. Charles S. Bacon, Chicago, Chairman; Dr. Oliver T. Osborne, New Haven, Conn.; Dr. Philip Mills Jones, San Francisco; Dr. A. B. Cooke, Nashville, Tenn.; Dr. H. C. Wood, Jr., Philadelphia.

COMMITTEE ON UNIFORM REGULATION OF MEMBERSHIP IN COUNTY AND STATE SOCIETIES.—Dr. Thomas S. McDavitt, St. Paul, Minn., Chairman; Dr. W. R. Steiner, Hartford, Conn.; Dr. Frederick R. Green, Chicago.

DELEGATES TO REPRESENT THE AMERICAN MEDICAL ASSOCIATION IN THE COUNCIL OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—Dr. George M. Kober, Washington, D. C., and Dr. George H. Simmons, Chicago.

Queries and Minor Notes

A GRAIN TO A DROP.

PEORIA, ILL., Sept. 2, 1908.

To the Editor:—I wish to call attention to a frequent error made in prescribing iodid of sodium and potassium. Practically every work on syphilis and genitourinary diseases makes the statement that if the iodid of potassium or sodium is prescribed in a saturated solution in distilled water, each drop of this solution represents 1 grain of the iodid.

This statement is erroneous. It takes 2 drops to represent 1 grain of the iodid. I prescribe one ounce of the iodid of sodium or potassium with distilled water added in sufficient quantity to make one ounce.

This is practically a saturated solution. Now the iodid of sodium solution will be found to contain about 120 drops and the potassium solution about 130 drops to the dram.

As it takes 2 drops to represent 1 grain of the drug, many physicians have unquestionably made the mistake of thinking that they were prescribing grain for drop in such a solution, but were in reality giving the patient only ½ grain of the iodid to each drop. I have been in error myself for years about this and think it important enough to call the attention of the profession to it.

J. CLAUDE PAINE, M.D.

ANSWER.—Our correspondent calls attention to but one of a number of errors frequently made in connection with the use of popular dose measures of medicinal substances. Inadvertently, however, he also makes an assertion that he himself can readily prove to be quite as incorrect as the one to which he calls attention. It has long been known that the size of a drop varies with the composition of the liquid, the shape, size and other characteristics of the surface from which it is dropped, the rate of flow, and, to some extent at least, the general atmospheric conditions existing at the time. Appreciating the readiness with which the size and weight of a drop may be influenced, and the evident difficulty of obtaining correlating results at different times, the fallacy of any dogmatic statement as to the size or weight of a drop must be apparent.

Many of us, despite the fact that we have been taught differently, are too readily disposed to consider as fact the popular notion that "a pint is a pound the world around," that a drop is the equivalent of a minim, that a teaspoonful represents one fluidrachm and that a tablespoonful is the equivalent of four teaspoonfuls, forgetting entirely that as measures of capacity the quantities are but approximate at best and that they frequently, if not always, differ widely from the quantities that they are supposed to represent. It has long been demonstrated that the approximate equivalents for the popular dose measures, as used in this country, are incorrect and misleading and the quasi-recognition that is frequently accorded them, such as the table of approximate measures in the now official Eighth Decennial Revision of the Pharmacopeia, serves to confuse rather than to aid in the development of accuracy.

Some attempts have been made to obtain measuring instruments which shall discharge drops of uniform size. Thus Whitall, Tatum & Co., Philadelphia, offer for sale minim pipettes claimed to discharge drops which each measure one minim. Since the size of a drop depends not only on the character of the opening at which it forms, but also on the nature of the liquid, such a pipette will only in part overcome the difficulty. At the international agreement respecting the unification of pharmacopeial formulas for potent drugs signed at Brussels, Nov. 29, 1902, it was agreed that the normal drop measure officially recognized shall have an external diameter of 3 mm. and give at the temperature of 15° C., 20 drops of distilled water per gm. Some of the recently published pharmacopeias contain tables giving the size of the drops of various liquids when dropped from the standard instruments.

We would suggest that physicians accept the suggestion of Dr. Paine to prescribe solution of sodium or potassium iodid made by dissolving one ounce (480 grains) of the substance in sufficient water to make one fluidounce, but that they use minims to indicate the dose to be taken, and that they direct the patient to secure a minim graduate for the purpose.

FOWLS AS TYPHOID BACILLI DISSEMINATORS.

WASHINGTON, D. C., Oct. 19, 1908.

To the Editor:—Have any investigations been made and results published as to the possibility of domestic fowls, particularly chickens, being typhoid bacilli disseminators. It has occurred to me that such may be the case for it is readily seen that chickens could feed on typhoid stools or ingest gravel on which such stools or urine have been deposited. Then, too, the chicken excreta might be exposed to flies and by them the germs could be carried to food. Typhoid fever epidemics of obscure origin might be traced to such sources, at least such a possibility should be borne in mind and investigations made along these lines.

DORSEY M. MCPHERSEN, M.D.

ANSWER.—Stokes (*Maryland Med. Jour.*, November, 1900) has recorded careful investigation on the possibility of the passage of living typhoid bacilli through the intestinal tract of fowls and

other animals. Very large quantities of a forty-eight-hour old broth culture of the typhoid bacillus were mixed with the food of two chickens, two white rats, two rabbits, two guinea-pigs, two pigs and one calf. Although at least 500 suspicious colonies from the feces of these animals were carefully tested, in no case was the investigator able to demonstrate the presence of typhoid bacilli in the dejecta.

CALCIUM LACTATE.

WASHINGTON, Oct. 19, 1908.

To the Editor:—Kindly give me a short description of calcium lactate, its physiologic action, dose and therapeutic indications. In various articles in THE JOURNAL, in which the calcium salts are mentioned in treatment of urticaria, purpura, etc., the lactate seems to be given preference to the chlorid. P. L.

ANSWER.—Calcium lactate is not official in any pharmacopeia, so far as we know. Calcium lactate, Ca $(C_3H_5O_3)_2 5H_2O$ is obtained in the preparation of lactic acid or may be prepared by dissolving calcium carbonate in warm diluted lactic acid, filtering while hot, and crystallizing. It occurs in white granular masses or powder, or in acicular crystals, odorless, and having scarcely any taste. It is soluble in water (1 in 15), less so in hot water, slightly soluble in alcohol, insoluble in ether. The solubility of different specimens of calcium lactate varies considerably and is affected by age. It becomes anhydrous at 100° C. (212° F.). Calcium lactate increases the coagulability of the blood and on this account is given before operations (1 or 2 gram doses—15 or 30 grains). It is said to be useful for chilblains and chronic ulcerations. It has been given with reported good results in hemophilia, purpura, and some forms of albuminuria; in rickets and tuberculous disease. The dose is 0.5 to 4 grams (10 to 60 grains). It is much less irritant than calcium chlorid, and may be injected subcutaneously. The large doses now given may be suspended in water, or, as this salt is permanent in the air, it may be dispensed in powders or in cachets.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending Oct. 24, 1908.

Reynolds, F. P., maj., in addition to present duties, will take charge of office of chief surgeon, Dept. of Dakota, during the absence of Col. George W. Adair.

Stephenson, William, lieut-col., promoted from major, with rank from May 1, 1908.

Truby, A. E., and Church, J. R., maj., promoted from captain, with rank from May 1, 1908.

Ford, J. H., maj., promoted from captain, with rank from May 20, 1908.

Ashburn, P. M., maj., promoted from captain, with rank from June 24, 1908.

Cole, C. LeR., capt., promoted from first lieutenant, with rank from May 13, 1908.

Quinton, W. W., capt., arrived at New York City on sick leave of absence for one month.

Blanchard, R. M., capt., relieved from duty at Fort Wingate, N. M., and ordered to Fort Sheridan, Ill., for duty.

Fife, J. D., capt., relieved from duty at Fort Slocum, N. Y., and ordered to sail from San Francisco, Nov. 5, for Philippine service.

Weir, F. M., M. R. C., ordered to Fort Mackenzie, Wyo., for temporary duty.

Lemmon, Robert, M. R. C., granted leave of absence for one month.

Henning, O. F., M. R. C., granted leave of absence for ten days, about Nov. 20; relieved from active duty at expiration of leave.

Buchsbaum, Maurice, M. R. C., ordered to active duty at Fort D. A. Russell, Wyo.

Stephenson, A. V., M. R. C., arrived at San Francisco, on the *Sheridan* for treatment at the Army General Hospital, San Francisco.

Betts, C. A., M. R. C., ordered to active duty at Fort Lawton, Wash.

Pargon, J. A., M. R. C., ordered to active duty at Fort Yellowstone, Wyo.

Foster, D. E., dent.-surgeon, arrived at San Francisco on the *Sheridan* for leave of absence for one month from Philippine Division.

Langenderfer, F. C., contract surgeon, arrived at San Francisco, on the *Sheridan* and ordered to Chicago, for annulment of contract.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending Oct. 24, 1908.

Riker, G. A., acting asst.-surgeon, appointed acting assistant-surgeon from Oct. 16, 1908; ordered to course of instruction at the Naval Medical School, Washington, D. C.

Donelson, M., asst.-surgeon, detached from the *Stringham* and ordered to the *Macdonough*.

Orders issued by Commander, Third Squadron, Pacific Fleet:

Morris, L., surgeon, ordered to the Naval Station, Cavite, P. I.

Carpenter, D. N., surgeon, detached from the Naval Station, Cavite, P. I., and ordered home.

Public Health and Marine-Hospital Service.

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended Oct. 21, 1908:

Carmichael, D. C., surg., granted 18 days' leave of absence from Nov. 16, 1908.

Stoner, J. B., surg., granted 5 days' absence from Oct. 19, 1908.

Young, G. B., surg., directed to proceed to Port Huron, Mich., and Milwaukee, Wis., on special temporary duty.

Cofer, L. E., P. S. surgeon, relieved from duty in Hawaii and directed to proceed to Washington, D. C., for further orders.

Grubbs, S. B., P. A. surgeon, directed to proceed to St. Petersburg, Russia, Berlin, Germany and Libau, Russia, on special temporary duty, Sept. 4, 1908. Detailed to represent the Service at the meeting of the International Committee at Paris, Nov. 4, 1908.

Heiser, V. G., P. A. surgeon, detailed to represent the Service at the meeting of the Southern Medical Association at Atlanta, Ga., Nov. 10-12, 1908.

White, M. J., P. A. surgeon, granted 7 days' leave of absence from Oct. 16, 1908.

Billings, W. C., P. A. surgeon, relieved from duty at Vancouver, British Columbia, and directed to proceed to Washington, D. C., for further orders.

Blanchard, J. F., acting asst.-surg., granted 2 days' leave of absence from Oct. 22, 1908.

Lyall, Rob, acting asst.-surg., granted 12 days' extension of leave of absence, without pay, from Oct. 5, 1908.

Tappan, J. W., acting asst.-surg., directed to proceed to Eagle Pass, Laredo, and Brownsville, Texas, and Naco, Douglas, and Nogales, Ariz., on special temporary duty.

Villoldo, Pedro, acting asst.-surg., granted 30 days' leave of absence from Oct. 20, 1908.

Rodman, J. C., acting asst.-surg., granted 10 days' leave of absence from Oct. 15, 1908.

BOARDS CONVENED.

Board of Medical Officers convened to meet at the Marine-Hospital, Baltimore, Md., Oct. 17, 1906, for physical examination of Cadets of the Revenue-Cutter Service; Surgeon L. L. Williams, chairman; P. A. Surgeon J. T. Burkhalter, recorder.

Board of Medical Officers convened to meet at the Marine-Hospital, New Orleans, on the call of the chairman, for the purpose of re-examining a candidate for a position in the Life Saving Service; Surgeon J. H. White, chairman; P. A. Surgeon H. W. Wickes, recorder.

Board of Medical Officers convened to meet at the Marine-Hospital, Baltimore, Oct. 26, 1908, for the purpose of making a physical examination of Cadet Engineers of the Revenue-Cutter Service, for promotion; Surgeon L. L. Williams, chairman; P. A. Surgeon J. T. Burkhalter, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Oct. 23, 1908.

SMALLPOX—UNITED STATES.

California: San Francisco, Sept. 12-Oct. 3, 7 cases.
Massachusetts: Lawrence, Sept. 27-Oct. 3, 1 death.
Ohio: Cincinnati, Sept. 26-Oct. 2, 2 cases.
Wisconsin: LaCrosse, Sept. 27-Oct. 3, 1 case.

SMALLPOX—INSULAR.

Philippine Islands: Manila, Aug. 23-29, 3 cases, 2 deaths.

SMALLPOX—FOREIGN.

Arabia: Aden, Sept. 7-14, 9 deaths.
Brazil: Rio de Janeiro, Aug. 31-Sept. 13, 1,386 cases, 566 deaths.
Santos, Aug. 31-Sept. 6, 15 cases, 5 deaths.
Ceylon: Colombo, Aug. 30-Sept. 5, 9 cases, 11 deaths.
Egypt: Cairo, Sept. 9-16, 1 case.
France: Paris, Sept. 19-26, 1 case.
India: Bombay, Sept. 1-8, 4 deaths.
Indo-China: Cholen, Aug. 22-29, 1 case.
Italy: General, Sept. 13-20, 33 cases; Naples, Sept. 29-Oct. 4, 4 cases, 1 death; Palermo, Aug. 5-12, 2 cases.
Japan: Kobe, Sept. 5-12, 1 case.
Java: Batavia, Aug. 8-22, 9 cases, 1 death.
Mexico: Acapulco, Sept. 19-26, 3 cases; Mexico City, Aug. 8-29, 16 deaths.
Norway: Christiania, Sept. 12-19, 1 case, 5 deaths.
Portugal: Lisbon, Sept. 19-26, 2 cases.
Russia: Warsaw, Sept. 22-29, 4 deaths.
Turkey: Bagdad, Aug. 30-Sept. 5, 19 cases, 5 deaths; Constantinople, Sept. 13-20, 12 deaths.

YELLOW FEVER.

Brazil: Manaos, Aug. 22-Sept. 5, 2 deaths; Para, Sept. 12-26, 2 cases, 2 deaths.
Martinique: Fort de France, Sept. 12-19, 3 cases.
Mexico: Merida, Sept. 19-Oct. 10, 4 cases; Veracruz, Oct. 19-20, 3 cases.

CHOLERA—INSULAR.

Philippine Islands: Manila, Aug. 22-29, 20 cases, 16 deaths; Provinces, 1,103 cases, 686 deaths.

CHOLERA—FOREIGN.

China: Hongkong, Aug. 15-Sept. 5, 10 cases, 10 deaths.
India: Madras, Aug. 29-Sept. 11, 230 deaths.
Japan: Moji, to Sept. 16, 36 cases, 13 deaths.
Russia: General, Sept. 25-Oct. 1, 3,251 cases, 2,429 deaths.
Odessa, Sept. 11-25, 8 cases, 6 deaths; Riga, Sept. 25, 1 case, 1 death; St. Petersburg, to Oct. 3, 6,411 cases, 2,429 deaths.
Straits Settlements: Singapore, Aug. 22-29, 10 deaths.

PLAGUE.

Brazil: Rio de Janeiro, Sept. 6-13, 1 case.
China: Hongkong, Aug. 15-Sept. 5, 5 cases, 6 deaths.
Formosa: General, Aug. 8-15, 9 cases, 2 deaths.
India: General, Sept. 5-12, 2,503 cases, 1,581 deaths; Bombay, Sept. 1-8, 22 deaths; Rangoon, Aug. 22-Sept. 5, 36 deaths.
Indo-China: Sadgen, Aug. 22-29, 13 cases, 12 deaths.
Japan: Kobe, Sept. 5-12, 1 death.
Trinidad: Port of Spain, Sept. 26-28, 2 cases, 2 deaths.
Venezuela: Caracas, Sept. 22-Oct. 4, 2 cases, 1 death.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

NEVADA State Board of Medical Examiners, Carson City, November 2. Secretary, Dr. S. L. Lee, Carson City.

LOUISIANA Homeopathic Medical Board, 919 St. Charles street, New Orleans, November 2. Secretary, Dr. Gayle Aiken, 1102 St. Charles avenue, New Orleans.

NEBRASKA State Board of Health, Capitol Bldg., Lincoln, November 4-5. Secretary, Dr. E. J. C. Sward, Oakland.

OKLAHOMA State Board of Medical Examiners, Muskogee, November 6. Secretary, Dr. F. P. Davis, Enid.

RHODE ISLAND State Board of Health, State-House, Providence, November 5-6. Secretary, Dr. Gardner T. Swarts, 315 State House, Providence.

TEXAS State Board of Medical Examiners, Houston, November 10. Secretary, Dr. M. E. Daniel, Honey Grove.

CONNECTICUT Homeopathic Medical Board, New Haven, November 10. Secretary, Dr. Edwin C. M. Hall, 82 Grand avenue, New Haven.

CONNECTICUT Eclectic Medical Board, Hotel Garde, New Haven, November 10. Secretary, Dr. T. S. Dodge, Torrington.

CONNECTICUT State Medical Examining Board, City Hall, New Haven, November 10-11. Secretary, Dr. Charles Tuttle, 196 York street, New Haven.

MAINE Board of Registration of Medicine, Preble House, Portland, November 10-11. Secretary, Dr. William J. Maybury, Saco.

FLORIDA Regular Board of Medical Examiners, Jacksonville, November 11-12. Dr. J. D. Fernandez, Jacksonville.

WEST VIRGINIA State Board of Health, Wheeling, November 10-12. Secretary, Dr. H. A. Barbee, Point Pleasant.

MISSOURI State Board of Health, Kansas City, November 23-25. Secretary, Dr. J. A. B. Adcock, Warrensburg.

MASSACHUSETTS Board of Registration in Medicine, State House, Boston, November 10-12. Secretary, Dr. Edwin B. Harvey, Room 159, State House, Boston.

The New Dean of Harvard Medical School.

At a meeting of the president and fellows of Harvard University, October 12, Dr. Henry Asbury Christian was elected dean of the Medical School to fill the place vacated over a year ago by Dr. William L. Richardson. The position required a man who not only would bring to his work administrative skill of a high order, but who had also received a comprehensive training in modern medicine, a training which adds to the equipment of the practitioner all that physical and biologic science can contribute, both of substantial knowledge and of method.

Dr. Christian is especially qualified for his new duties. He is recognized as a fruitful investigator in the fields of pathology and clinical medicine. He served in 1906 as chairman of the Section on Pathology and Physiology of the American Medical Association. He is also a member of the American Association of Pathologists and Bacteriologists, the Massachusetts Medical Society, the Boston Society of Medical Sciences and the Association of American Physicians. Harvard Medical School is to be congratulated on their choice.

Iowa May and June Reports.

Dr. Louis A. Thomas, secretary of the Iowa State Board of Medical Examiners, reports the written examinations held at Keokuk, May 12-14; Sioux City, May 26-28; Des Moines, June 4-6, and at Iowa City, June 9-11, 1908. The number of subjects examined in was 8; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 134, of whom 100 passed and 34 failed. Nineteen applicants were licensed through reciprocity. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Chicago Coll. of Med. and Surg.	(1908)	75.1, 75.1
Northwestern Univ. Med. School.	(1908)	80.2
Rush Med. Coll.	(1907)	88
Keokuk Med. Coll., Coll. of P. and S.,	(1904)	75.2; (1908) 75.2, 75.4, 75.6, 78.6, 78.8, 81.1, 81.1, 81.6, 82.2, 82.6, 84.8, 85.3, 85.7, 86.5, 87.4, 87.8, 88.7, 89, 91.5.
State University of Iowa,	(1908)	75.2, 76.7, 76.8, 77.1, 78, 78.4, 79.6, 79.7, 80.5, 80.6, 81.2, 81.4, 81.4, 81.5, 81.6, 81.7, 81.7, 82.1, 82.2, 82.6, 82.6, 82.7, 83.1, 83.5, 83.6, 84.1, 84.4, 84.4, 85, 85.4, 85.7, 86.1, 87, 87, 87.2, 87.5, 87.6, 89, 90.2.
State University of Iowa, Homeopathic Dept.,	(1908)	78.7, 79.9, 81, 81.1, 86.5, 87.1, 88.1, 92.2.
Drake University,	(1908)	75.5, 75.6, 76.8, 76.8, 77.2, 79.1, 79.7, 81, 81.1, 82.6, 83.4, 84.7, 88.5, 89.5, 90.1.
Sioux City Coll. of Med.,	(1908)	79.8, 80.1, 81.8, 82.1, 83.5, 84, 85.2.
Harvard Med. School	(1906)	79.4
University of Michigan	(1907)	81
Hahnemann Med. Coll., Kansas City	(1908)	75
Barnes Med. Coll.	(1907)	79.2
Creighton Med. Coll.	(1908)	86.7
Hahnemann Med. Coll., Philadelphia	(1908)	77.7, 92.2

FAILED.

College of P. and S., Chicago	(1905)	59.1
Hahnemann Med. Coll., Chicago	(1908)	74.1
State University of Iowa,	(1906) 61.7; (1908) 68.4, 67.7, 71.2, 73.4, 74.1, 74.2.	
State University of Iowa, Homeopathic Dept.	(1908)	64.6
Sioux City Coll. of Med.	(1908)	65.8
Drake University	(1908) 69, 72.1, 73.7, 74.2	
Keokuk Med. Coll., Coll. of P. and S.,	(1908) 44, 45.8, 53.5, 62, 67.1, 67.6, 67.8, 69.2, 69.8, 70.1, 70.2, 70.2, 71.5, 74.1, 74.5, 74.7.	
Ensworth Med. Coll.	(1908)	64.1
St. Louis University	(1908)	72.5
Creighton Med. Coll.	(1907)	60.5

LICENSED THROUGH RECIPROCITY.

College.	Year Grad.	Reciprocity with
College of P. and S., Chicago	(1904) (1907)	Illinois
Rush Med. Coll.	(1900) (1906)	Illinois
Chicago Coll. of Med. and Surg.	(1908)	Illinois
American Med. Miss. Coll.	(1906)	Illinois
Bennett Coll. of Ecl. Med. and Surg.	(1905)	Illinois
Dearborn Med. Coll.	(1905)	Illinois
Illinois Med. Coll.	(1907)	Illinois
Northwestern Univ. Med. School	(1907)	Illinois
Kentucky University	(1905)	Nebraska
St. Louis University	(1905)	Illinois
University Med. Coll., Kansas City	(1908)	Missouri
Ensworth Med. Coll.	(1908)	Kansas
University of Nebraska	(1904) (2, 1907) (1908)	Nebraska
University of Pennsylvania	(1903)	Illinois

New Mexico July Report.

Dr. J. A. Massie, secretary of the New Mexico Board of Health and Medical Examiners, reports the written examination held at Santa Fé, July 13-14, 1908. The number of subjects examined in was 14; total number of questions asked, 110; percentage required to pass, 75. The total number of candidates examined was 11, all of whom passed. Thirty-six applicants were licensed on presentation of satisfactory credentials. The following colleges were represented

PASSED.

College.	Year Grad.	Per Cent.
Chicago Coll. of Med. and Surg.	(1908)	86.5
Kentucky School of Med.	(1908)	84.5
St. Louis Coll. of P. and S.	(1908)	82.9
University of Missouri	(1908)	93.5
Memphis Hosp. Med. Coll.,	(1891) 79.5; (1892) 83.7; (1904)	75.3
University of Nashville	(1903)	78.2
University of Tennessee	(1900)	75.5
College of P. and S., Dallas	(1908)	77.5
University of Texas	(1907)	80.3

LICENSED ON CREDENTIALS.

College.	Year of Grad.
National University, Washington	(1897)
Rush Med. Coll.	(1892)
Northwestern Univ. Med. School	(1904)
Bennett Coll. of Ecl. Med. and Surg.	(1878) (1888)
College of P. and S., Chicago	(1903)
Medical Coll. of Indiana	(1892)
Kansas Med. Coll.	(1906)
Southwestern Homeo. Med. Coll., Louisville	(1896)
Kentucky School of Med.	(1888) (1880)
University of Louisville	(1878) (1887)
Hospital Coll. of Med., Louisville	(1887)
Louisville Med. Coll.	(1904)
Tulane University of Louisiana	(1900) (1906)
Baltimore Med. Coll.	(1896) (1906)
College of P. and S., Baltimore	(1903) (1906)
University of Maryland	(1905)
Saginaw Valley Med. Coll.	(1898)
Michigan Coll. of Med. and Surg.	(1902)
Missouri Med. Coll.	(1888)
St. Louis University	(1905) (1906)
Kansas City Homeo. Med. Coll.	(1894)
Barnes Med. Coll.	(1899)
Long Island Coll. Hosp.	(1891)
Medical Coll. of Ohio	(1896)
Ohio Med. University	(1897)
Jefferson Med. Coll.	(1906)
University of Pensylvania	(1896)
University of Texas	(1898)
National Med. School, Mexico City	(1877)

Nebraska August Report.

Dr. E. J. C. Sward, secretary of the Nebraska State Board of Health, reports the written examination held at Lincoln, Aug. 5-6, 1908. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 25, of whom 20 passed and 5 failed. Twenty reciprocal licenses were issued at this examination. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Rush Med. Coll. (1896) 81.3;	(1907)	85.9
Northwestern Univ. Med. School (1907) 79.3;	(1908)	82.7
American Med. Miss. Coll.	(1905)	79.7
University of Louisville (1908) 79.2,	80.7	
Harvard Med. School	(1908)	78.1
Creighton Med. Coll. (1907) 87.6; (1908) 75.1,	78.3, 80.3, 81.1, 82.2, 86.5.	
Nebraska Coll. of Med.	(1907)	76
Lincoln Med. Coll.	(1907)	79
University of Nebraska (1902) 90;	(1903)	90
Western University, London, Ontario.	(1906)	75.9

FAILED.

Keokuk Med. Coll.	(1906)	68.1
Creighton Med. Coll. (1906) 72.5*	(1908)	73.6
Meharry Med. Coll.	(1908)	67, †73.2

LICENSED THROUGH RECIPROCITY.

College.	Year Grad.	Reciprocity with
Howard University	(1891)	Missouri
Northwestern Univ. Med. School	(1907)	Illinois
College of P. and S., Chicago (1903),	(1906)	Illinois
Hahnemann Med. Coll., Chicago	(1908)	Illinois
American Med. Miss. Coll.	(1903)	Iowa
Keokuk Med. Coll.	(1896)	Iowa
Sioux City Coll. of Med.	(1908)	Iowa
Louisville Med. Coll., (1892), (1898) Missouri;	(1903)	Indiana
Barnes Med. Coll.	(1904)	Missouri
University of Kansas	(1907)	Texas
University Med. Coll., Kansas City (1907) Missouri;	(2, 1908)	Kansas
Hamline University	(1906)	Minnesota
Marion Sims Coll. of Med.	(1899)	Missouri
St. Louis Coll. of P. and S.	(1903)	Missouri
Lincoln Med. Coll.	(1901)	Kansas

* Fourth examination.
† Second examination.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Mississippi's Next Senator on Typhoid Fever.

The *Jackson* (Miss.) *Issue*, owned and edited by Hon. James K. Vardaman, has been discussing, editorially, sanitary and public health questions. A recent number contains an editorial calling for the establishment and equipment of a modern hospital in Jackson, also an editorial on the economic importance of typhoid fever. In the latter, the editor refers to a family of eight members, all of whom were prostrated with typhoid fever at the same time. He says:

In the near future such a condition of affairs in any community in this state will be remembered as the result of the crude barbarity of our civilization. The disease of which that family is suffering is essentially a preventable disease. Its spread was the result of ignorance, uncleanliness and carelessness. The failure to take certain precautions may result in the death of a dozen of the best, most useful citizens of the neighborhood and an untold amount of suffering. There ought to be a health officer in every county in this state, charged with the duty of preventing the spread of such diseases. . . . Such a policy would be economical when measured by the standard of dollars and cents. The loss of time incident to sickness is much more expensive than the cost of proper medical treatment and the enforcement of wise, sanitary laws. It is passing strange to me that man will spend money to exterminate insects that destroy the crops, germs that kill cattle, hogs, horses, cows and chickens, but are wholly careless and indifferent when it comes to preserving the public health and preventing the spread of disease among human beings. I trust that this matter may engage the intelligent attention of the legislature at its coming session and that much needed remedial legislation may be enacted.

It is a gratifying and encouraging evidence of the spread of modern scientific knowledge among laymen when statesmen like Mr. Vardaman demand proper sanitary laws as a duty to the people of the state. Such support and endorsement will go far to secure for Mississippi the health legislation which is so urgently needed. If our political leaders and statesmen can be convinced of the importance and urgent necessity of such laws, the problem of their enactment and enforcement will be greatly simplified. The value of such leadership in the campaign for better health conditions will be incalculable.

Public School Instruction in New Jersey.

The public school authorities of New Jersey have inaugurated a systematic campaign of education in the public schools against tuberculosis. The State Board of Health has issued placards for exhibition in the school rooms throughout the state. These placards contain a few easily understood rules for the prevention of the spread of the disease and emphasizing the importance of fresh air, sunshine and proper methods of living. Such work should be done in every state, either by the State Board of Health or by the State Medical Society. The hope of the future, both morally and hygienically speaking, is the army of school children now developing. If the child can learn prophylaxis and personal cleanliness alone with his letters and multiplication table, the control of disease in the future will be vastly aided.

A Breezy Invitation from Mexico.

The invitation for the annual meeting of the International Medical Association of Mexico, to be held at Tampico, Jan. 20-22, 1909, is refreshingly breezy and informal, as shown by the following extracts:

If you wish to read a paper send the title to the chairman of the section; if you wish to talk we will listen and criticize; if you wish to wrap yourself in a large chunk of silence you can have it frozen on you at the ice plant without extra charge, but come.

The chairman of the entertainment committee says:

Those who like tarpon fishing should bring their tackle; shooters should bring their guns and duck shot. Those who don't like hunting or fishing can bring along a few new ideas, some good stories and a thirst.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
BOWLING GREEN, KENTUCKY.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Third Month.

THIRD WEEKLY MEETING.

3. DISEASES DUE TO PARASITIC INFUSORIA.

Trichomonas vaginalis, trichomonas (cercomonas) hominis, lamblia intestinalis, balantidium coli; size, pathogeny, occurrence in body, of each.

4. DISEASES DUE TO FLUKES.

A. PULMONARY DISTOMIASIS.—Parasite, distribution, symptoms.

B. HEPATIC DISTOMIASIS.—Species found, distribution, occurrence in animals, symptoms.

C. INTESTINAL DISTOMIASIS.

D. HÆMIC DISTOMIASIS; BILHARZIOSIS.—Parasite, symptoms.

5. DISEASES CAUSED BY NEMATODES.

A. ASCARIASIS.

Ascaris lumbricoides: shape, size, length, ova, site in intestine, number, migrations. Symptoms and treatment.

B. TRICHINIASIS.

Trichinella spiralis; (a) adult or intestinal form, (b) larva or muscle trichinella; shape, size, frequency, epidemics, distribution in United States, occurrence in animals, hogs, etc. Development: ingestion of trichinella in flesh, digestion of capsule, migration to small intestine, brood of embryos in 7 to 9 days, direct migration and by lymph and blood stream, penetration of muscle with interstitial myositis, development of capsule at about six weeks. Calcification of capsule and worm, vitality of trichinella. Presence in stools. Diagnosis, gastrointestinal symptoms, epidemic form, worms in stools, presence of eosinophiles, muscular pain and tenderness, edema about eyes.

C. OXYURIASIS.

Oxyuris vermicularis: Frequency, distribution, size, shape, source of infection. Symptoms and treatment.

Marriages

JOSEPH L. MCNEECE, M.D., Morley, Mich., to Miss Emma Belle Lehn of Newark, N. J., October 8.

WILLIAM W. WOOD, M.D., Jasper, Minn., to Miss Mollie Hansen of Flandreau, S. D., October 16.

HORACE D. BLOOMBERGH, Medical Corps, U. S. A., to Miss Helen Howard of Atchison, Kan., Oct. 7.

JULIUS G. NEWGARD, M.D., Roslyn, Wash., to Miss Edith Corbitt of Seattle, Wash., September 28.

FRANK N. SCHROEDER, M.D., Holy Cross, Iowa, to Miss Clara Marie Heles of Dubuque, October 13.

LADISLAUS DETRE, M.D., Budapest, Hungary, to Miss Lillian Coblenzer of Washington, D. C., October 15.

PAUL F. BROWN, M.D., Eveleth, Minn., to Miss Caroline Louise Kidney of Janesville, Minn., October 8.

WILLIAM JAY MERSEREAU, M.D., to Miss Josepha Myrta Newbury, both of New York City, October 14.

EDWARD SPENCER COWLES, M.D., to Miss Florence Jaquith, both of Boston, at Bridgeport, Conn., October 8.

JOHN LAND NEILSON, Passed Assistant Surgeon, U. S. Navy, to Miss Caroline McDougal of Vallejo, Cal., October 16.

THEODORE IRVING TOWNSEND, M.D., Dannemora, N. Y., to Miss Katherine Burdick of New York City, October 14.

CHARLES WOUSON EVELETH, M.D., New York City, to Miss Elizabeth H. MacMunn, of Mount Alverno, Pa., recently.

FRANCIS A. GRAHAM, M.D., Lincoln, Neb., to WINNIFRED GOLDSBURY, M.D., of Craig, Neb., at Rogers, Neb., October 13.

JAMES WALLACE VAN DUSEN, captain Medical Corps, U. S. Army, to Miss Besse Evelyn Haines of Elyria, Ohio, October 20.

WREY GILMOR FARWELL, Passed Assistant Surgeon, U. S. Navy, to Miss Virginia Davis Schaefer, at Baltimore, October 22.

Deaths

Thomas Haven Dearing, M.D. Harvard Medical School, 1861; said to have been the oldest practitioner of Norfolk County, Mass.; formerly president of the Norfolk District Medical Society; and ex-officio vice-president of the Massachusetts Medical Society; professor of surgery and dermatology in the College of Physicians and Surgeons, Boston; and for nearly six years dean of that institution; assistant surgeon to a Massachusetts regiment and in charge of a large hospital in Washington during the Civil War; for many years a member of the school boards of Boston and Braintree, and for five years chairman of the latter board; in 1889 representative to the legislature; a member of the local pension board; died at his home in Braintree, October 15, aged 82.

Charles Franklin Rand, M.D. University of Georgetown, Washington, D. C., 1873; who was the first man to volunteer for service in the Union Army during the Civil War, and was awarded the first Medal of Honor given by Congress; for three months in captivity in Libby Prison, Richmond; afterward made provost marshal of the District of Columbia; a member of the American Geographic Society and American Association for the Advancement of Science; died at his home in Washington, October 13, from angina pectoris, aged 67.

George Ashbridge Fairlamb, M.D. University of Pennsylvania, 1848; for many years a member and in 1908 made an honorary member of the Medical Society of the State of Pennsylvania; one of the oldest practitioners of Bellefonte, Pa.; who served through the Civil War, was a prisoner in Libby Prison and was discharged from the service as lieutenant colonel; surgeon of the Lazarretto below Philadelphia for two years; died in his apartments in Bellefonte, October 12, from senile debility, aged 82.

Weston Le Roy Herriman, M.D. Queens College, Kingston, Ont., 1855; L.R.C.P. & S., Kingston, 1869; acting assistant surgeon in the U. S. Army during the Civil War; member of the municipal council and of the medical staff of the Ross Memorial Hospital, Lindsay, Ont.; town physician; formerly medical health officer; and president of the Conference of Charities and Corrections; honorary president of the Children's Aid Society of Ontario; died at his home, October 9, aged 76.

William R. Miles Kellogg, M.D. Johns Hopkins Medical School, Baltimore, 1904; a member of the American Medical Association; city bacteriologist of Seattle; founder and secretary of the Washington Association for the Prevention and Relief of Tuberculosis; a veteran of the Spanish-American War; died in the Seattle General Hospital, October 14, from chronic amebic dysentery contracted during his war service, aged 33.

Abel M. Crawford, M.D. Rush Medical College, 1850; of Leoni, Mich.; for some time postmaster and surgeon for the Detroit, Grand Haven and Milwaukee Railway at St. Johns, Mich.; first treasurer of Gratiot County; surgeon of the Eleventh Michigan Volunteer Infantry during the Civil War; died at the home of his daughter in Jackson, June 7, from cerebral hemorrhage, aged 80.

Azarie Brodeur, M.D. Laval University, Quebec, 1879; University of France, Paris, 1886; Faculté de Médicine de Paris, 1887; one of the most prominent surgeons of Canada; a Knight of the Legion of Honor; member of the Anatomical Society and the Clinical Society of Paris; died at his home in Montreal, October 16, from hemorrhage of the stomach, aged 58.

Robert W. Green, M.D. University of Buffalo, 1889; a member of the Medical Society of the State of New York; a veteran of the Civil War; sometime health officer of Geneseo, village trustee, physician of Livingston County and member of the local and district boards of education; died at his home in Geneseo, October 5, from angina pectoris, aged 64.

Josephus P. Stewart, M.D. University of Louisville, 1884; a member of the American Medical Association and of the American Association of Railway Surgeons; local surgeon of the Rock Island System at Clay Center, Kan.; and president of the Clay Center Hospital Association; died suddenly on a Rock Island train near Topeka, October 9, aged 64.

John J. Lace, M.D. Philadelphia University of Medicine and Surgery, 1870; of Pascoag, R. I.; a veteran of the Civil War; for a number of years a member and chairman of the school committee; in 1898 elected a member of the house of representatives, and a year later senator from Burrillville; died in Glendale, R. I., October 18, aged 70.

James R. Willits, M.D. Indiana Central Medical College, Indianapolis, 1851; assistant surgeon in the Army during the Civil War; since 1871 a practitioner of Fredonia, Kan.; for many years a member of the local pension board; and surgeon to the Santa Fe system; died at his home, September 22, aged 78.

John Eberle West, M.D. Medical College of Ohio, Cincinnati, 1867; a member of the local board of pension examining surgeons; president of the Hudson County (N. J.) board of health; a veteran of the Civil War; died at his home in Jersey City, October 14, from dilatation of the heart, aged 65.

John L. Weitman, M.D. Jefferson Medical College, 1890; of Great Falls, Mont.; a member of the Montana State Medical Association; for many years chief surgeon of the Great Northern Railroad; died at the home of his brother in Oakland, Cal., from disease of the stomach, October 7, aged 53.

John D. Cameron, M. D. McGill University, Montreal, 1878; a member of the Michigan State Medical Society; local surgeon at Iron Mountain for the Chicago, Milwaukee and St. Paul and Chicago and Northwestern railways; died suddenly from heart disease, at his home, October 4, aged 57.

George W. Nichols, M.D. Vermont Academy of Medicine, Castleton, 1861; a pioneer practitioner of Minnesota; and for more than thirty years a member of the Minnesota State Medical Association; died at the home of his son in Sonoma, Cal., September 14, from arteriosclerosis, aged 72.

Daniel L. De Saussure, M.D. Medical College of the State of South Carolina, Charleston, 1857; a member of the South Carolina Medical Association; surgeon in the Confederate service during the Civil War; died suddenly at his home in Camden, October 16, from pulmonary edema.

George W. Pruett, M.D. University of Louisville, 1896; a member of the Kentucky State Medical Association; surgeon of the Second Infantry, Kentucky State Guard; died at his home in Mannsville, October 16, from the effects of an accidental gunshot wound of the head, aged 37.

Alexander W. Beck, M.D. New York University, 1891; of New York City; a member of the American Medical Association, American Medico-Pharmaceutical League and German Medical Society; died at St. Vincent's Hospital, New York City, from nephritis, October 14, aged 56.

V 19

Walter Gibson Melvin, M.D. University of the South, Sewanee, Tenn., 1901; Tulane University, New Orleans, 1903; a member of the American Medical Association; of Grand Junction, Colo.; died in Denver, August 20, two days after an operation for appendicitis, aged 32.

Marcus Tessler, M.D. Keokuk (Iowa) Medical College, 1896; Rush Medical College, 1897; a member of the American Medical Association; was found dead in his office in St. Paul, October 19, from the effects of poison, supposed to have been self-administered with suicidal intent.

Titus V. Williams, M.D. Richmond (Va.) Medical College, 1858 or 1859; colonel in the Confederate service during the Civil War; for twenty-five years a practitioner of Edinburg, Mo.; died at the home of his son in Valeria, Iowa, May 9, from cerebral hemorrhage, aged 72.

Robert W. Purdy (examination Ohio, 1896); a member of the Ohio State Medical Association; for more than fifty years a practitioner of Bradyville, Ohio; a veteran of the Civil War; for one term coroner of Adams County; died suddenly at his home, October 12, aged 77.

Samuel Passmore May, M.D. Victoria College, Toronto, 1863; for many years inspector of the public libraries of Ontario, and several times in charge of dominion and provincial exhibits at world's fairs; died at his home in Toronto, October 20, after a long illness.

Manuel V. Fernandez, M.D. University of Madrid, Spain, 1862; a pioneer practitioner of Los Angeles; at one time superintendent of the San Andreas Hospital, Lima, Peru; died October 11, at his home in Monrovia, Cal., from cerebral hemorrhage, aged 71.

Francis Alfred Gile, M.D. New York Homeopathic Medical College, 1875; a veteran of the Civil War; formerly president of the New Jersey State Homeopathic Medical Society; died at his home in Bloomfield, N. J., October 12, from heart disease, aged 63.

Alexander C. Davison, M.D. St. Louis Medical College, 1867; said to have been the oldest practitioner of Jefferson City, Mo.; for four years surgeon in the Confederate service during the Civil War; died at St. Mary's Hospital, Jefferson City, October 12.

Benjamin C. Wright, M.D. Hospital College of Medicine, Louisville, 1891; formerly coroner of Clark County, Ind.; a member of the Indiana State Medical Association; died at his home in New Albany, October 4, aged 45.

W. A. Hyde, M.D. College of Physicians and Surgeons, New York, 1855; surgeon of the Twenty-first Iowa Volunteer Infantry during the Civil War; died at his home in East Hollywood, Los Angeles, Cal., March 12, aged 78.

Howard George Neiman, M.D. Jefferson Medical College, 1906; resident physician at the Philadelphia Home for Incurables; died from accidental aconitin poisoning, taken in mistake for codein, October 15, aged 24.

James E. Hardy, M.D. Homeopathic Medical College of Pennsylvania; University of Edinburgh, Scotland; formerly of Norfolk, Va.; died at his home in Glasgow, Scotland, September 11, from cancer of the tongue, aged 66.

Joseph Benson Small; who practiced medicine for a short time in Morristown, Vt.; vice-president of the Winooski Savings Bank; died from senile debility at his home in Winooski, Vt., September 21, aged 84.

Irving J. Cook, M.D. University of Vermont, Burlington, 1893; of New York City; died from the effect of poison or a gunshot wound, October 22, at a hotel in New York City. The case is believed to be one of suicide.

David Franklin Moss; a pioneer eclectic practitioner of Jasper County, Mo.; surgeon of the Sixth Kansas Volunteer Cavalry during the Civil War; died at his home in Moss Springs, Mo., September 6, aged 92.

Henry E. Yarbrough, M.D. Maryland Medical College, Baltimore, 1903; of Markham, Texas; a member of the State Medical Association of Texas; was shot and killed in an affray in Markham, October 9, aged 34.

John Edward Caldwell, M.D. New York University, 1870; said to have been the oldest practitioner of Mecklenburg County, N. C.; died at his home near Huntersville, October 9, from pneumonia, aged 69.

Samuel Holmes Kelly, M.D. Jefferson Medical College, 1851; for many years a practitioner of West Liberty and Wheeling, W. Va.; died at his home in Echo Point, W. Va., October 5, from influenza, aged 80.

Alexander K. Ferguson, M.D. Trinity Medical College, Toronto, 1894; of Toronto; while riding a bicycle, October 7, collided with a street car, and died while being conveyed to the hospital, aged 45.

Henry Herriford, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1876; a member of the Iowa State Medical Society; died at his home in Leando, Iowa, October 7, from tuberculosis, aged 56.

James Sherbourne Riggs, M.D. College of Physicians and Surgeons, Chicago, 1883; a veteran of the Civil War; one of the earliest practitioners of Redlands, Cal.; died at his home, October 8, aged 77.

Edwin Person, M.D. Kentucky School of Medicine, Louisville, 1880; a veteran of the Civil War; formerly a practitioner of Dodge, Neb.; died at his home in Omaha, October 21, aged 64.

James W. Hadlock, M.D. Cincinnati College of Medicine and Surgery, 1863; for eight years a member of the department of charities of Oswego, N. Y.; died at his home, October 8, aged 70.

Samuel E. Wood; a practitioner of Waterloo, Ind., from 1863 to 1866 when he retired; veteran of the Civil War; died at his home in Chicago, September 26, from pneumonia, aged 69.

W. H. Sherman, M.D. Bellevue Hospital Medical College, New York, 1867; a veteran of the Civil War; died at the Toledo (Ohio) Hospital, June 14, from cerebral hemorrhage, aged 67.

Andrew Joseph Ronan, M.D. Albany (N. Y.) Medical College, 1897; who served in the U. S. Army in the Philippine Islands; died at his home in Albany, N. Y., May 27, aged about 35.

Herbert A. Russell, M.D. Long Island College Hospital, Brooklyn, 1896; and for two years thereafter prosector; died at his home in New York City, October 14, from pneumonia, aged 37.

John A. Brobst, M.D. Pennsylvania Medical College, Gettysburg, 1857; for fifty years a practitioner of Bernville, Pa.; died at his home October 18, from cardiac asthma, aged 72.

Jesse P. Herring, M.D. New York University, 1877; a member of the Kentucky State Medical Association; died suddenly at his home in Oakville, Ky., October 15, aged 51.

Hugh Thompson Murray, M.D. Baltimore College of Medicine; for 18 years house physician of the Arlington Hotel, Washington; died suddenly November 21, 1907, aged 60.

William McKnight, M.D. Rush Medical College, 1862; for many years a practitioner of Granville, Ill.; died at his home in Normal, Ill., October 16, from uremia, aged 85.

James A. Kerr, M.D. Kentucky School of Medicine, Louisville, 1881; of Columbia, Mo.; died at St. Mary's Hospital, Jefferson City, Mo., September 21, aged about 70.

Theodore Clarence Haecker, M.D. Rush Medical College, 1903; of Chicago; died at the Frances E. Willard Hospital in that city, February 6, from pneumonia, aged 36.

John Sutherland, M.D. University of Pennsylvania, 1876; of Bedeque, Prince Edward Island; was found dead in bed in a hotel in Montreal, October 5, aged about 60.

John E. Groves, M.D. Bennett Medical College, Chicago, 1887; of Altamont, Ill.; died in a hospital in St. Louis, October 14, about two months after a surgical operation.

Patrick Francis Whalen, M.D. New York University, 1887; of Chicopee, Mass.; died recently and was buried from the home of his parents in Chicopee, February 8.

A. W. Laybourne (years of practice, Ohio); said to have been the oldest practitioner of Clark County, Ohio; died at his home in Springfield, October 8, aged 90.

William H. Andrews (license, Mich.; years of practice, 1900); a practitioner of Fennville, Mich., for thirty-one years; died at his home September 22, aged 68.

Robert Swenton Campbell, M.D. Western Reserve University, Cleveland, 1908; died at the home of his parents in that city, October 17, from typhoid fever, aged 25.

Miranda P. Wiswell, M.D. University of Michigan Homeopathic Medical College, Ann Arbor, 1889; died at her home in Philadelphia, September 28, aged 52.

Robert A. Reynolds, M.D. Leonard School of Medicine, Shaw University, Raleigh, 1888; a colored practitioner of Danville, Va.; died at his home, September 27.

Arthur Kelty, M.D. Western Reserve University, Cleveland, Ohio, 1873; of Youngstown, Ohio; died suddenly from heart disease in Xenia, October 9, aged 72.

Emma Rosson (license, Mass., 1894); for more than 25 years a practitioner of Wakefield, Mass.; died in Union Hospital, Boston, October 19, aged 60.

George A. Elliott, M.D. New York University, 1892; of New York City; visiting physician to Fordham Hospital; died in Glen Cove, N. Y., October 15.

Melissa Cranston Gideon; a pioneer practitioner of Illinois; and for eighteen years a resident of Seattle; died April 16, from senile debility, aged 80.

Dennis McCarthy, M.D. Botanico-Medical College of Ohio, Cincinnati, 1850; died at his home in Dayton, from senile debility, October 17, aged 87.

Matthew Huber, M.D. University of Louisville, 1855; died at his home on the Bardstown Road, near Louisville, October 19, from pneumonia, aged 79.

George W. Holstein, M.D. University of Pennsylvania, 1843; a retired practitioner of Bridgeport, Pa.; died suddenly at his home October 2, aged 88.

Aristide Beaugrand Champagne, M.D. University of the Victoria College, Coburg, 1875; died at his home in Montreal, October 14, aged 58.

Thomas J. Clark, M.D. Eclectic Medical Institute, Cincinnati, 1874; died at his home in Summitville, Ind., recently, from lung trouble.

Green Hazlewood, M.D. Medical College of Indiana, Indianapolis, 1870; died at his home near Chambersburg, Ind., October 16, aged 73.

Robert W. George, M.D. Cincinnati Medical College, 1860; died at his home in Elgin, Ill., September 24, from paralysis, aged 76.

Elijah F. Davis, M.D. Eclectic Medical Institute, Cincinnati, 1857; died at his home in Lakewood, Cleveland, October 18, aged 79.

William Carson Underwood, M.D. Eclectic Medical Institute, Cincinnati, 1893; died recently at his home in Dayton, Ohio, aged 41.

Pleasant Kernal, M.D. Knoxville (Tenn.) Medical College, 1855; died at his home in Prairie City, Ill., September 25, aged 72.

Joseph F. Black, M.D. Medico-Chirurgical College, Philadelphia, 1897; of Erie, Pa.; died October 6, from heart disease.

Lark Moon, M.D. Starling Medical College, Columbus, Ohio, 1891; died at his home in that city, October 15, aged 42.

John Brand Young, M.D. Rush Medical College, 1876; died at his home in Golconda, Ill., October 12, aged 65.

Oscar H. Gibbs, M.D. New York University, 1871; died at his home in Middletown, N. C., October 8.

Book Notices

PRINCIPLES OF PATHOLOGY. By J. George Adami, M.A., M.D., LL.D., F.R.S., Professor of Pathology in McGill University. Vol. I. General Pathology. Cloth. Pp. 948, with illustrations. Price, $6.00. Philadelphia: Lea & Febiger.

A careful review of this volume of over 900 large pages, which is devoted to the subject of general pathology alone, leaves as the most distinct impression the fact that this is Adami's "pathology." Here is no submissive following of text-book traditions, no thoughtless adoption of "accepted teachings," no more repetition and revision of what has been written by every book-maker and declaimed by every medical school lecturer. A broadly trained scholar has studied and taught pathology for many years as a scientist, has thought independently and reasoned vigorously, and this book represents the individual opinions and beliefs of its writer, clearly presented and stoutly maintained. It is an absolutely unique undertaking in the literature of pathology, and one divides his admiration between the industry, independence and originality of the writer, and the courage of the publishers in undertaking the preparation and production of so extensive a work of so unusual and advanced a character.

The "Principles of Pathology," as projected, will consist of two volumes; the first, now before us, dealing with "General Pathology," while a second volume on the special pathology of the organs and tissues is promised at an early date. Perhaps the best idea of the method of discussion adopted in this work will be obtained from the author's own explanation of his attitude toward text-books, which is: "There are different orders of minds, and no work can appeal to all. For myself, in beginning my studies, I found that I could easily remember the matter of such works as the larger Lyell's 'Principles of Geology,' Foster's 'Physiology,' and Fagge's 'Medicine,' to cite examples in which there was a reasoned treatment of the subject, whereas, to attempt to commit to memory 'cram books,' laden with facts and names, was mental agony. I saved time and gained knowledge by reading my subject at large. It is to those possessing a like order of mind that this work is addressed."

From this peroration it may be foreseen that Adami's "Pathology" does not consist of a classification of pathologic conditions in which cause, pathologic anatomy and results follow one another in neat but untruthfully exact order. Rather Adami has discussed the subject in a broad way, with emphasis on the things that have interested him, slighting things that have not, but always in a manner that is original, independent and vigorous. Most of the chapters, particularly in the introductory sections (which occupy no less than 355 pages) partake of the nature of short monographs or addresses on topics concerning which Adami has ideas of his own to advance or to defend; in the sections devoted to more definite topics the discussion is more systematic and more satisfying. Professor Adami's viewpoint is quite different from that of the average medical-school and autopsy-room pathologist, being much modified by his familiarity with general biology in its broadest sense, from which he has gained many diverging and independent ideas that are interesting and stimulating to those with a different training and viewpoint, however much they may find to question or dispute. In contrast to the typical German text-book of pathology, in which pathologic anatomy is made the chief and often almost the only theme, Adami's work relegates the description of postmortem appearances and histologic findings to the background, and places emphasis on pathologic physiology and chemistry, a feature which is greatly to be commended.

It is obvious that so extensive a work can not be discussed chapter by chapter in the space of a review, and hence generalities must in the main suffice. The following special points, however, may be mentioned: The introductory chapters are numerous, extensive, but for the most part argumentative rather than systematic, much attention being given to the presentation and defense of certain hypotheses regarding various fundamental biologic principles; they are, nevertheless, well worth reading for their stimulating originality and for the nuggets of facts from many unusual and widely scattered sources. Cell growth, adaptation and inheritance are considered with an extensiveness and originality uncommon in medical literature. Monstrosities and abnormalities are discussed thoroughly, clearly and well, this being one of the best sections of the entire book, and the only one in which the illustrations are of much account. (This last defect is due to the destruction of most of the illustrations that had been collected for this book by the burning of the McGill University Medical School.) But little space is given to animal parasites and there is no discussion of specific bacterial infections and their characteristic lesions—possibly these matters are reserved for the second volume. The general subject of reaction to injury and infection is, however, most admirably covered in much the same way as in Adami's article on inflammation in Allbutt's "System," which article is now one of the classics of English medical literature. Immunity is satisfactorily discussed in regard to the general theories and the history of the subject, although the proposed modification of Ehrlich's theory seems to be even more hypothetical than the original. Regeneration and transplantation are well discussed, and lead logically to the consideration of neoplasms, a sequence not appreciated by most writers of text-books. In this section on tumors is much that is independent and valuable. The method

of classification of tumors that has come into almost universal usage is admittedly an illogical compromise between various systems of classification, which throws unlike growths together, separates related growths, fails entirely to cover some cases, more often leaves it uncertain in which of several groups a tumor should be placed, and is in general unsatisfactory and unscientific. Adami has refused to accept this condition of things, and has proposed and for several years has urged a system of classification which is logical and which succeeds in bringing order out of the chaos of disarrangement in which the neoplasms find themselves. It would be a blessed thing for future generations if Adami's or some other logical system of classification of tumors could be adopted, but we fear that the needed reforms will come slowly, especially while incapable and unprogressive examiners continue to propose the questions and grade the answers for state board examinations. One can not fail to approve Adami's reasons for discarding the pedantic "ata" termination for the plural of the names of tumors, while marvelling at the headings of alternate pages with "teratomas" and "teratomata." Many special points concerning tumors, and especially their relations to certain other forms of tissue growth, are handled in an unusual manner, but space does not permit of their discussion. The volume concludes with a consideration of the retrogressive processes, which is thoroughly modern and more complete than in most text-books on pathology, although strongly flavored with Adami's own ideas and experiences.

It is evident that this book is not intended to replace the more elementary and more systematic text-books on general pathology in common use among medical students, but to supplement them, and to remedy their greatest defect, the absence of stimulus to independent thinking and to generalization. In its chosen field it has a great service to perform, and we believe that it will succeed notably. No teacher of pathology will be without it; every teacher of any branch of medicine should be familiar with its contents, since general pathology is fundamental to all branches, and such students as wish to lift themselves out of the common rut will find stimulus to independent thinking on every page. However acceptable Professor Adami's personal interpretations of certain specific pathologic phenomena may or may not be, the living personality of the pages, after all, constitutes the greatest virtue of this book, and even those who disagree as to various and sundry details will admit the vivifying influence of the whole work. Adami's discoursive style makes the book in the main interesting reading, although there is much unevenness in respect to interest and to clearness. At times there seems to be an effort to maintain literary pretension, and it generally seems that the same ground might be covered as well with fewer words, but if the extent of the work, the technicality of the subject, and the length of time required for its preparation are considered, these minor faults are insignificant and excusable. Of course, in 900 pages some errors will appear, such, for instance, as crediting Ricketts' valuable book on immunity to Professor Hektoen (p. 528), but on the whole they are remarkably few, and, to conclude with a trite phrase, "the presswork is excellent."

ANATOMY, DESCRIPTIVE AND SURGICAL. By Henry Gray, F.R.S., Lecturer on Anatomy at St. George's Hospital Medical College, London. 17th Edition. Revised and Re-edited with additions by John Chalmers DaCosta, M.D., Professor of Principles of Surgery and of Clinical Surgery in Jefferson Medical College, Philadelphia, and Edward Anthony Spitzka, M.D., Professor of General Anatomy in Jefferson Medical College, Philadelphia. Cloth. Pp. 1614, with illustrations. Price, $6.00. Philadelphia: Lea & Febiger, 1908.

That a text-book on descriptive anatomy should have reached the seventeenth edition is sufficient evidence of its value. While successive revisions have added much new matter and perhaps left but little of the original text written by Henry Gray over fifty years ago, the book still bears the name which has become to generations of American medical students almost synonymous with the study of anatomy. The seventeenth edition has been revised and re-edited by Dr. John Chalmers Da Costa and Dr. E. A. Spitzka. Most of Spitzka's work has been on the chapter of the nervous system, which has been largely rewritten for this edition. Teachers and students of anatomy will probably agree that the chapters on the development and topographic anatomy of the brain were the least satisfactory of any parts of the work in previous editions. In the present edition, this department is brought up to date so far as the developmental theories of the nervous system are concerned, and is also much better and more graphically illustrated than formerly. Beside many cuts from Testut, Poirier and Charpy, Duval and the earlier editions of Gray, there are a number of new illustrations which are of excellent quality—notably, the cut on page 879 showing different varieties of anatomic markings on the floor of the fourth ventricle; a number of schematic drawings, showing the direction of nerve fibers and the location of the various nuclei; the drawings on page 904 showing the brain-stem and the adjacent structures, and the perpendicular cross-section on page 913, showing the optic thalamus and caudate nuclei and their relation to the ventricles. Particularly graphic are the cuts on pages 933 and 943-45-53, showing the relative position of the deeper structures, as though seen through a transparent brain. The consideration of cortical localization is also much better than in previous editions.

The chapter on the peritoneum, both in text and illustrations, more nearly approximates to that in the twelfth edition, which contained by far the most satisfactory consideration of this subject. The development of the peritoneum and its ultimate adult arrangement are considered at length, as is also the subject of retroperitoneal fossæ.

The chapters on osteology and myology are copiously illustrated, some of the cuts being taken from Spalteholz and many being new and original cuts. Particularly noticeable is the increasing amount of space given in each successive edition to the lymphatic system, showing the increasing importance of applied anatomy both to the surgeon and the general practitioner.

Miscellany

Defective Vision in Philadelphia School Children.—In view of the fact that investigation showed that 60 per cent. of children examined in the Philadelphia schools had eyestrain or defective vision, the city in 1907 established an ophthalmologic division of the bureau of health. The city council appropriated $300 for glasses for children unable to pay for them, and with this money 354 children were fitted with glasses. These children, without glasses, could not read from the blackboard and could not see the print in their books; in many instances they were thought backward and often mentally deficient. The correction of these defects by the fitting of proper glasses was followed by remarkable improvement in the work and conduct of the pupils. Children in special schools were enabled to return to the regular schools. Dr. Joseph L. Neff, director of the Department of Public Health and Charities, sends us a copy of the report of the first three months' work, which he considers has demonstrated that many so-called mental defectives and incorrigibles do not really belong in that category. The report emphasizes the fact that the expense incurred is more than counterbalanced by the increased worth of an educated citizen over an illiterate one who may become a public charge, or whose earning capacity is so curtailed that he can contribute but a small amount to the support of the state. Dr. Neff believes that in many cases such children would have joined the criminal classes or in some way have become a burden on the community. In addition to remedying defects of vision, infectious eye diseases, including trachoma, were treated and minor operations were performed. The report includes letters to the department from school principals stating the benefit obtained by individual pupils.

Henry Gray, Anatomist.—Dr. Frank K. Boland of Atlanta, Ga., being struck by the meager information obtainable in reference to the author of "Gray's Anatomy," with considerable pains succeeded in accumulating from various records and from the few living people who had known Gray, the following information, which he published in the *American Journal of the Medical Sciences* for September.

Henry Gray was probably born in 1827, although it is not stated positively. His father was private messenger to George IV and William IV. He had one sister, who died at the age of 21 years, and two brothers. Young Gray does not seem to have been beset with the financial obstacles which so often handicap men of talent. His student and professional course to success was uninterrupted.

Gray's signature appears on the pupils' book at St. George's Hospital as entering on May 6, 1845, as a "perpetual student." There is no evidence to support the absurd story that Gray was a poor student and failed in some of his examinations; the facts tend to prove the very opposite. In 1848, at the age of 21, he was awarded the triennial prize of the Royal College of Surgeons of England, for a paper on "The Origin, Connection and Distribution of the Nerves of the Human Eye and Its Appendages, Illustrated by Comparative Dissections of the Eye in the Other Vertebrate Animals." Although this prize was first instituted in 1822, it has had only eight recipients.

Young Gray assuredly possessed great talent and untiring energy. The opinion of all those who remember him agrees in describing him as a most laborious and methodical worker, and one who learned his anatomy by the tedious but invaluable plan of making his dissections himself. Judging from his results he had no time for anything but his work.

In June, 1850, he was appointed house surgeon to St. George's Hospital, which position he held for the customary twelve months. On June 3, 1852, he received the distinction of being elected a Fellow of the Royal Society at the remarkably early age of 25 years. His hospital record and his activities in original research must have been highly esteemed to have secured him such honor.

Gray won the Astley Cooper prize of 300 guineas, in 1853, for his dissertation on "The Structure and Use of the Spleen," a work which ranks next in importance to his "Anatomy." This prize is awarded triennially, and is open to the world, students of Guy's Hospital alone being debarred from competing. Other papers which Gray had written up to this time were: In 1850 "The Development of the Retina and Optic Nerve, and of the Membranous Labyrinth and Auditory Nerve;" in 1852, "The Development of the Ductless Glands in the Chick;" and in 1853, "An Account of a Dissection of an Ovarian Cyst which Contained Brain."

From 1853 to 1858 Gray was lecturer on anatomy at St. George's Hospital. It is also recorded that he was surgical curator of the pathologic museum during this period. No doubt his services as demonstrator of anatomy were very much in demand, for he had established a considerable reputation while a student. His time must have been given largely to the dissecting room, and we learn nothing of his experience in clinical work.

Gray after this devoted his energies to the preparation of the work by which he is really well known, the masterpiece, "Anatomy, Descriptive and Surgical." Since this work is the only one of its kind which has come down to us from this time, the idea exists that no good books on the subject had been written before Nothing could be more erroneous. Many excellent anatomies were in common use at the time Gray's made its appearance, and the new work was pitted against keen competition. Quain and Sharpey's anatomy was probably the most popular book, although others, such as Wilson and Winslow's, and the translations of the French writers, Cruveilhier, Bichât and Cloquet, had strong following.

Gray undoubtedly felt that there was room for improvement in these treatises, particularly in the matter of arrangement and illustrations. He had a good conception of the principles of pedagogy, and desired, in so far as he could, to smooth, for his students the hard road to anatomic knowledge. A comparison of Gray's work with that of his predecessors shows that he achieved his purpose in an admirable manner. He was not the father of anatomy, and it was not the presentation of any new anatomic discoveries, but the clearer and more systematic presentation of old ones, backed strongly by unparalleled drawings, which secured for his book its phenomenal success. To Dr. H. Vandyke Carter, who made the drawings, a large part of the credit for the success of the work must be given.

The first edition was published by John W. Parker & Son in 1858, and was the only edition that Gray ever saw. The book was a success from the first. Such clear treatment of descriptive anatomy had not been known before, and there has been but small improvement, except for additions, made in it since. The introduction of the remarks on surgical anatomy was the first ever attempted by an English author, and proved to be a popular feature.

The cuts far exceeded in number and excelled in accuracy and vividness any which had appeared previously. It is astonishing to see how many of these drawings are in the "Gray" of to-day.

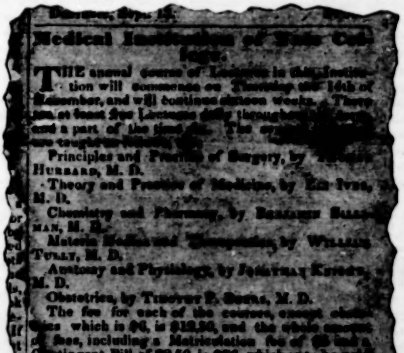
Nevertheless, the critics were by no means unanimous in their praise. The *Lancet*, in its review, spoke in the most favorable terms, but the *Medical Times*, which was then the chief rival of the *Lancet*, took an altogether different view its reviewer indulging in what was then known as a "slashing criticism."

In 1861 Gray was a candidate for the post of assistant surgeon to St. George's Hospital, two vacancies having at that time occurred. He would certainly have been elected, but unhappily was attacked by confluent smallpox, which he contracted while looking after his nephew, who had fallen a victim to the same disease. After a very short illness, Henry Gray died, on June 13, 1861, at the age of 31 years.

He was at work on the second edition of his book at the time of his death, and had made good progress on a work on tumors. The manuscript of this can not now be found, and no part of it was ever published. Before his death Gray had been made a Fellow of the Royal College of Surgeons by examination, and surgeon to St. James' Infirmary.

There is nothing recorded about his ability as a diagnostician or operator. The plan of his professional career, which is worthy of emulation, seems to have been first to ground himself thoroughly in the fundamental branches of anatomy and pathology, after which he would be equipped for the best possible work in the field of practical surgery. He was about to quit the dissecting room for the operating amphitheater when his life was brought to a sudden close.

An Old Medical College Advertisement.—The accompanying illustration is made from a newspaper printed in 1833. The paper is in the possession of Dr. Howard N. Lyon, Chicago,


Medical Institution of Yale Col[lege]

THE annual course of Lectures in this Institution will commence on Thursday the 14th of November, and will continue sixteen weeks. There will be four Lectures daily throughout the week, and a part of the time [illegible]. The [illegible] are taught by the following Professors:

Principles and Practice of Surgery, by [illegible] Hubbard, M. D.

Theory and Practice of Medicine, by Eli Ives, M. D.

Chemistry and Pharmacy, by Benjamin Silliman, M. D.

Materia Medica and Therapeutics, by Willard Tully, M. D.

Anatomy and Physiology, by Jonathan Knight, M. D.

Obstetrics, by Timothy P. Gaines, M. D.

The fee for each of the courses, except obstetrics which is $6, is $12,50, and the whole course of fees, including a Matriculation fee of $5 and a Contingent Bill of $2,50, is $76, which is to be paid in advance. The graduation fee, is $25. [illegible]

Sept. 3. [illegible]

Tuttle County Commissioners of the County

and was found in the back of an old mirror, one of the family heirlooms. The heading of the paper is missing, but it was probably issued at Northfield, Mass.

Society Proceedings

COMING MEETINGS.

Nevada State Medical Association, Goldfield, Nov. 10-11.
Ohio Valley Medical Association, French Lick, Ind., Nov. 11-12.

IDAHO STATE MEDICAL ASSOCIATION.

Sixteenth Annual Meeting, held at Boise, Oct. 8-9, 1908.

The president, Dr. E. W. Kleinman, Hailey, in the chair.

Election of Officers.

The following officers were elected: President, Dr. J. L. Stewart, Boise; vice-president, Dr. G. H. Coulthard, Idaho Falls; secretary, Dr. E. E. Maxey, Boise, re-elected.

Seattle, Wash., was selected as the 1909 meeting place.

President's Address.

DR. E. W. KLEINMAN, Hailey, discussed reciprocity in medical licensure, going into the subject deeply, and expressing himself in favor of reciprocity between all states complying with the Idaho standard of qualifications. He urged the Association to adopt a resolution favoring such reciprocity that the position of the members of this Association might be known to other states and to the law-makers of Idaho. He also urged the members to encourage and support the American Medical Association in its effort to supply the profession with a reliable medical directory, and further recommended that the Idaho State Medical Association take steps to secure a provision in the medical law which would require the governor of the state to make appointments to the state board of medical examiners from a list of eligible names to be recommended by the Idaho State Medical Association.

Surgery of the Kidney.

DRS. G. H. COULTHARD and C. M. CLINE, Idaho Falls: With few exceptions, pathologic conditions of the kidney are accepted as being surgical conditions. In all kidney surgery, however, the preservation of normal tissue is important because of the high death rate following removal of excreting kidney substance, and for this reason renal plastic surgery has a prominent future, particularly in hydronephrosis and pyelonephrosis. All patients with renal calculi must be treated surgically, for we have no means of dissolving the stone. In floating kidney, if the individual is suffering no distress or has no important urinary changes, nephropexy is not indicated. Tuberculosis of the kidney should be treated by radical surgery only. The cystoscope, ureteral catheterization, the segregator, examination of urine for tubercle bacilli, and the *x*-ray are useful helps in diagnosis of this condition.

DISCUSSION.

DR. L. P. MCCALLA, Boise: Diagnosis is most important because we have to deal with surgical conditions which should be recognized and treated early. In the majority of cases, hematuria indicates either tuberculosis, hypernephroma, or stone. Catheterization of ureters is difficult and should be performed only by the expert. Segregation is more easily done but is not so reliable. I saw two cases of hypernephroma recently in which the tumor was large and firmly adherent. Operation was attempted in one and abandoned because of the firm adhesions, and I believe that operation is usually difficult in these larger growths on that account. The diagnosis of tuberculosis of the kidney is often difficult. Examination of the urine is unsatisfactory and often unreliable on account of the presence of smegma bacillus.

DR. B. F. CAMPBELL, Rexburg: The statement that nephritis in the other kidney is not a contraindication to the removal of a kidney if tuberculous is too broad and should be modified.

DR. G. H. COULTHARD: There was some outline of the kidney substance yet remaining and the tumor was vascular and adherent. As to removal of tuberculous kidney where the other kidney shows nephritis, I think that there is an even division of opinion among authorities, and the procedure must be governed in each case by the patient's condition.

(*To be continued.*)

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Thirty-fourth Annual Meeting, held at Louisville, Ky., Oct. 13-15, 1908.

The President, DR. ARTHUR R. ELLIOTT, Chicago, in the chair.

Prayer was offered by the Rev. John K. Mason, D.D. Addresses of welcome were delivered by Hon. James F. Grinstead, mayor, in behalf of the city of Louisville, and in behalf of the state by Hon. Augustus E. Wilson, governor. Dr. Lewis S. McMurtry responded for the association.

The officers elected were named in THE JOURNAL last week.

The scientific work of the association was divided into two sections, medical and surgical; we commence with the report of the surgical section.

Hernia of the Pelvic Floor.

DR. CHANNING W. BARRETT, Chicago: From study of embryology, we learn that the tail muscles of the quadruped develop into the levator ani muscle of man. Hernia may develop at any place in the abdominal wall due to weak defective walls and increased abdominal pressure, but the pelvic floor, because it is the lowest part of the abdominal wall, and has natural openings, which at times are much dilated, furnishes a frequent site for the development of hernia. Following the overstretching or laceration of the levator ani muscle, the pelvic floor sags and the abdomino-pelvic contents begin to herniate through the defect, first the bladder or rectum, or both, then the uterus and other organs. The terms "laceration of the perineum" and "prolapse of the uterus" are not comprehensive and have led to erroneous treatment. Removal of a prolapsed uterus alone removes only a portion of the contents of the hernia, and still allows a hernial sac to be formed of the vagina with the rectum, bladder and intestines as contents. The condition is not cured by plastic operation on the vaginal mucous membrane or vulvar skin. While defects in the muscles are repaired, it must be remembered that predisposition of the hernia to return is furnished by the vaginal and rectal outlets. The uterus must have its axis put at an agle with that of the vagina. In so-called "prolapse of the rectum," the support furnished by the levator ani is defective. The cure of prolapse of the rectum should deal with this muscle instead of being attempted by futile plastic operations on the rectum. Work on the levator ani should be accomplished in lacerations of the perineum without causing superficial structures to close the vagina. This can be done by making the line of incision at the junction of the vagina and vestibule instead of on the labia majora, as is frequently done, thus leaving the normal entrance into the vagina. Superficial perinecrrhaphies, not dealing with the levator muscle, are worse than useless.

Vaccine Therapy in Surgical Infections.

DR. JOHN C. HOLLISTER, Chicago: The article is a brief summary of clinical conclusions of a series of cases of infection with staphylococcus, tubercle bacillus and gonococcus treated by vaccine therapy and based for the most part on the opsonic index. Only those cases are considered in which vaccine had been given long enough to draw clinical conclusions, and care has been taken to avoid overstatement of facts. Thirty-four staphylococcus infections were persistently treated; 25 by autogenous and 9 by stock vaccines; cases consisted of 12 of acne, 15 of boils or large furuncles, 2 of empyema, 1 mixed infection with case of lupus, and 2 fistulas mixed. The results: Thirty-eight per cent. cured; 38 per cent. improved; 20 per cent. not improved. Of the 25 patients treated by autogenous vaccines, 32 per cent. were cured; 36 per cent. improved; 32 per cent. did not improve. Of the 9 receiving stock vaccine, 7 were cured and 2 were slightly improved. Forty-one patients with tuberculosis were treated. There were patients with bone and joint diseases, 4 of which had also pulmonary involvement—29 in all; or patients with urinary tract infection; 3 with pulmonary tuberculosis; 4 with tuberculous glands of neck; 1 with generalized (lung, genital tract, skin, conjunctiva) infection, and 1 case of peritonitis. Results: Seventy per cent. improved—15

greatly, 13 slightly; 30 per cent. unimproved. Of the 13 patients unimproved, 10 had generalized infection.

I believe that the opsonic index is by no means an unfailing guide for determining the amount of vaccine and the time of administration, for the following reasons: 1. Many cases showing persistent high index show no clinical improvement. 2. Fewer number of patients improve, although the index remains comparatively low. 3. Many continue to improve greatly when treated without regard to the index. These reasons apply especially to staphylococcus infection in which we have found as a rule before treatment normal or high indices. We believe there is a normal index, and that the opsonic index, when obtained with careful technic, is a distinct aid in diagnosis, especially in the chronic localized infections. A persistently low or varying index is a strong indication that the patient is suffering from specific infection.

Process for Making New Noses.

DR. H. R. ALLEN, Indianapolis: First, make a plaster-of-Paris mask or reproduction of the nose-less space. Second, model half a dozen or more different noses that are appropriate to the other features of the face. Third, if desirable, model other features of the face that need improvement. Fourth, construct a hollow metallic bridge or supporting frame which will reproduce the shape of nose selected when placed beneath the skin. Fifth, operation: Pull the upper lid forward, and about one centimeter below the gingiolabial fold, make an incision about one-third the thickness of the lip and run parallel with the gum margins of the upper teeth. Let this incision terminate about the first molar tooth. Complete the incision vertically and dissect the soft tissues of the nose and face free from the skull. Care should be taken not to injure the nerves from the infraorbital foramen nor tear the ducts. Sixth, place the nostril hook into the nostrils and pass the points around so that they come out underneath the upper lip. Seventh, make traction upward and outward on the hook and the entire field for supporting the nose frame comes into plain view. Eighth, stretch the nasal tissues forward and prepare the foundation for the bridge or metallic support for the nose. Ninth, place the new hollow metallic bridge under the lip, where it is to rest permanently. Tenth, suture the original wound. If there are no soft tissues and consequently nothing under which to place a metallic bridge, the constructive principles differ, inasmuch as it is necessary to dissect out the skin on each side of the nasal orifice and draw the skin together and suture it in the median line. Perinostril openings must be made. Later when a firm union is established, the regular gingiolabial incision is made and the nose construction operation proceeds as described. A normal looking and functioning nose is permanently established. The procedure is simple and there are no disagreeable sequelæ that I am aware of. The voice at first is modified, but soon becomes normal. There is some advantage in the saving of time and tissues. It takes months to make a flap nose and still longer to graft on a finger or other tissues; and the flap and graft noses are not artistic. This method permits the patient to select his own features, because he can have a nose of any shape or size.

DISCUSSION.

DR. M. F. COOMES, Louisville: I have been engaged in this business for a number of years and have thought many times of attempting to do what Dr. Allen has done, but I have not had the courage to carry out my convictions. I have made plaster cast of noses and patients have worn them successfully. I know of nothing more mortifying and more derogatory to the welfare of the individual than to have a noseless face or flat nose. The method described by Dr. Allen should be tried by other surgeons.

DR. JOSEPH R. EASTMAN, Indianapolis: I have seen one patient treated by Dr. Allen, and in this case the boy's face was so changed that even his friends hardly recognized him. I think the method will be permanently useful. Few men, however, have the artistic sense and mechanical dexterity to be able to arrange a support and fit a nose for it in so artistic a way.

(To be continued.)

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Third Annual Meeting, held at Kansas City, Mo., Oct. 19-21, 1908.

The President, DR. THOMAS E. HOLLAND, Hot Springs, Arkansas, presided and made the annual address.

The Place of the Physician in the Community.

DR. THOMAS E. HOLLAND: The medical profession has produced and is producing many good men in their various lines, many great teachers who know the needs of their sections, and realizing that it is well nigh impossible to teach or cooperate in the sections of the American Medical Association, they have deemed it necessary to bring into existence an association of a more circumscribed number of workers; so the Medical Association of the Southwest was formed, not as an abridgement, but as an adjunct to the good work already accomplished by the American Medical Association. On account of geographical conditions it is but natural that the states comprising this association should bind themselves together for the diffusion of medical knowledge peculiar to their sections of the country as well as to foster fraternal relations among the members.

The work the American Medical Association is accomplishing through the zeal of Dr. J. N. McCormack is excellent. We need to follow his plan. Each state should have a committee of public instruction. The method followed by the Maryland society is an excellent one and should be imitated by other state associations. The duty of this committee of public instruction is to enlighten the public in matters pertaining to the public health. During its first year the work of this committee was carried on mainly by lectures; a series of so-called "major lectures" being given by leading medical men on a variety of health topics of public interest, while what was known as "minor lectures" was carried on among various social organizations, such as church societies and women's clubs.

A new plea for the physician to take his place among men of community interest has been added by the Governor of California, who asked the medical men of that state to put some physicians in line for election to the two branches of the legislature, in order that they may advise with him on matters pertaining to medical legislation.

Physicians made possible the building of the Panama Canal, made Havana a clean city, and diminished the possibilities of introducing yellow fever among us. Physicians have kept cholera in check, pointed out the danger of bubonic plague through the rat-infested districts of San Francisco, and now urge that the government shall maintain sentinels to guard the Gulf Coast from yellow fever, the Mississippi from cholera, the whole of the United States from bubonic plague. Physicians also discovered the stegomyia as a yellow fever carrier, and the rat and the ground squirrel as plague carriers.

What is the maintenance of Yellowstone Park, the need of a standing army, a labor strike, a cotton crop, compared to the danger of a threatened epidemic? Yet, all these other interests have their representatives in the cabinet, and the physician must needs appeal to untrained men for a hearing in regard to matters of vital importance, should legislation therefor be needed. Prevention of disease does not enrich a physician's exchequer, so it may not be said that he works from selfish motives. I am no prophet of evil, but when fever or plague has scourged the country, on account of negligence of men in high places, as the forest fires of Michigan, which destroyed millions of dollars' worth of property, have scourged her people, then, perhaps, will the physician's real place be known and recognized. Organization, education, regulation, are dependent on each other, root and branch. Like the crusaders of old, through organization and education we have taken a step toward the enfranchisement of the human mind; we have sounded the call to health and our abiding faith in mankind makes us know that legislation will follow, and, if we are true to ourselves as guardians of the public health, we can not be false to our trust.

Division of Fees and Giving Commissions.

DR. BACON SAUNDERS, Fort Worth, Texas, in the address on surgery, said, in part: In these days of strenuous commercial adventure it is not a matter of surprise that the spirit of pro-

fessional promoting should have gained a foothold in our ranks. If there were not members of the profession in quasi good standing who raise the point as to the morale of the practice there would not be occasion to discuss the question of fee-dividing or commission-giving by whatever name the conscience-searing, profession-degrading, bargain-counter deal is called. In some communities this custom is practiced to a considerable extent, and by men from whom both the public and the profession have a right to expect better things. I am persuaded that in such instances those who are so doing have not looked at the question from all standpoints, and it is to be hoped are not aware of the wrong they are doing to the public, to their fellow practitioners and to themselves. Such men have only to be shown the error of their ways. They will then turn and walk in the paths of professional rectitude and uprightness. If their conduct is not caused by thoughtlessness, then it is due to avaricious cupidity, and can not be defended by any honorable right-thinking man. A prominent surgeon was asked by a country doctor what he would charge to come to a certain town and do four laparotomies the physician stating that the patients were poor and could not afford to pay much. With these facts before him, the surgeon said, in reply, that he would do the four operations for $200. The operations were performed, and at the close of them the surgeon received this amount in cash. Subsequently it was learned that this country doctor had obtained from these four patients a sum which aggregated $1,000, thus pocketing $1,000 for himself and giving the surgeon only $200 for his services.

Another surgeon was asked by a physician to come to a certain city to perform six operations, stating the patients were poor, but for which he (the country doctor) would see that the surgeon received $300 for his services. Under the circumstances the surgeon did the operations, and it was learned later that this physician received $1,000 from the patients, of which amount he gave the surgeon $300. The remedy is in a general moral uplift of the profession. If there is any class of men on earth whose mainspring of action should be the highest conception of professional, social and moral rectitude it is our profession.

Operative Treatment of Hemorrhoids.

DR. W. H. STAUFFER, St. Louis.: For general anesthesia I prefer and use ether, unless it is contraindicated. The operation to be selected depends on the three following factors: (1) Complete restoration of function; (2) the time required; (3) the pain produced. The clamp and cautery operation has come to stay, and by many men is considered the only one worthy of consideration. It is well adapted to chronic cases, in which the sphincter is relaxed and contraction is much to be desired. The ligature operation, as performed by the ancients, resembles in many respects the operation as done today. In my last 200 patients with hemorrhoids requiring surgical interference, about 25 per cent. had been operated by one of the approved methods. The unsatisfactory results could easily be traced to the following: (1) The attempt to adapt the pathologic condition to the operator's pet method, instead of selecting the operation best adapted to the individual case; (2) the improper postoperative treatment. The clamp and cautery operation can not be used unless a general anesthetic is employed. I have modified the usual methods of excision and ligature, and claim the following advantages for my method: Complete restoration of function; absolute prevention of postoperative hemorrhage; simplicity of method and after-treatment; the patient remains in bed three days, and from work from seven to ten days; very little pain after the first twelve hours, and the permanency of the results obtained.

DISCUSSION.

DR. E. H. THRAILKILL, Kansas City, Mo.: I use the clamp and cautery operation in cases in which there are no ulcers. When an ulcerated condition exists it is better to use the ligature, because one can pass the ligature around the ulcer which has been bleeding and arrest the hemorrhage by tying the artery. There is too much sloughing attending the injection method. As to dressings after operation, I condemn the practice of using tubes in the rectum.

DR. R. H. BARNES, St. Louis: In operating on hemorrhoids I prefer chloroform as a general anesthetic. I avoid the ligature or suture in rectal operations on account of the danger of infection. The injection method is not a good one when one compares results from it with results obtained by other methods of treating hemorrhoids. The preferred operation is the clamp and cautery method.

DR. W. H. COFFEY, Kansas City, Mo: The ligature has its place, as well as the clamp and cautery, in treatment of hemorrhoids. Most patients with hemorrhoids can be treated in the office; they need not go to a hospital. Large, painful, internal hemorrhoids require a general anesthetic, preferably chloroform or ether, according to one's own special ideas.

DR. JOHN D. RIDDELL, Enterprise, Kan: My patients have complained of throbbing pain for two or three days after operation. Following the operation, Dr. C. H. Mayo suggests that we go around the external sphincter and tie the cords, as he calls them, make a little incision, radiating from the center of the anus, just outside the external sphincter, and you will find the next day, if you examine the patient, that the rectum is bulging a little. This incision relieves tension and affords the patient much comfort; in fact, so much comfort that the surgeon will do well not to neglect it in finishing his operation for hemorrhoids.

DR. JAMES A. FOLTZ, Fort Smith, Ark: The patient should be very thoroughly under the influence of the anesthetic before one begins even to dilate the sphincter, otherwise the results may be disastrous. The anesthetist should be a capable man or should be watched very closely to see that he is careful.

DR. W. H. STAUFFER: The preparation of the patient is largely an individual matter. The object is to render the parts as nearly aseptic as possible. The choice of anesthetic is by no means unimportant. Ether is a decidedly safer anesthetic than any other in doing surgery on these parts. It is better to operate on patients with large hemorrhoids at a hospital rather than at the office.

(*To be continued.*)

INTERNATIONAL CONGRESS ON TUBERCULOSIS.

Held at Washington, D. C., Sept. 28 to Oct. 3, 1908.

(*Continued from page 1453.*)

SECTION III.—SURGERY AND ORTHOPEDICS.

Tuberculous Arthritis of the Hip Joint.

DR. STEPHEN H. WEEKS, Portland, Maine: The treatment should be divided into local and constitutional, and the local is the more important. Local treatment is divided into mechanical and operative; the mechanical is used in the majority of cases. The broad principle of local treatment is to give rest to the affected joint, and this may be secured by either traction or fixation, or both, according to the indications. In the constitutional treatment, everything must be done to strengthen the defenses of the system against the encroachments of the tubercle bacilli. This applies equally well whether one is dealing with pulmonary tuberculosis or with tuberculosis of the joints. The salient idea is to increase the vital resistance by fresh air, sunlight and proper nutrition. Remarkable results have been achieved in recent years in cases of tuberculosis of the various joints by an outdoor life, particularly at the seashore, and without resort to operative measures. All that can be said of vaccine therapy at present is that it may prove a valuable adjunct to other treatment.

DISCUSSION.

DR. WILLY MEYER, New York: There can be no doubt that in the last 25 years the pendulum has swung toward conservatism in the treatment of these cases. In the beginning of antisepsis, 30 years ago, almost every surgeon attacked the hip joint by means of resection. So far, it has been impossible to apply the Bier treatment successfully to the hip joint. The joint is supplied by the internal iliac vessels, and the iliac vein can not be compressed. I have made attempts to compress the inferior vena cava. This is difficult and painful, and yet I believe that it is the only solution of the prob-

lem. It may be possible to construct cups, but they would have to fit very snugly about the hip. Many links are necessary to complete the chain in the treatment of tuberculosis, and tuberculin, hyperemia and hygienic and dietetic treatment are very important links.

DR. JOHN LINDAHL, Denver, Colo.: An important fact in connection with joint disease is that the joint is supplied by the same nerve that supplies the surrounding muscles. This accounts for the spasm of the muscles in these cases. These spasms are particularly injurious at night, and to control them I have been in the habit of using a firm bandage applied to the thigh and hip. I have also used a canvas casing which could be buckled on. I have never been able to apply a plaster-of-Paris dressing that would control the spasms for more than three or four days, because there is always a tendency for the cast to become loose on account of the absorption of the fat.

DR. S. H. WEEKS: I wish to emphasize the fact that hip joint disease is primarily a local inflammation and should be treated as such. If the disease is recognized early and treated properly, in the vast majority of instances operative interference will not be necessary.

Tuberculosis of the Bladder.

DR. WILHELM KAROO, Berlin: Tuberculosis of the bladder is almost always a descending process, of hematogenous origin. As a rule, it is the result of renal or genital tuberculosis. A pathologic distinction has to be made between genuine bladder tuberculosis and tuberculous cystitis. The seat of the morbid changes in the bladder usually depends on the mode of infection. Thus, in a case of right-sided renal tuberculosis the lesion is near the right ureter. The chief symptoms of bladder tuberculosis are difficult micturition, hematuria and pyuria. The diagnosis must be confirmed by finding the tubercle bacilli, either directly in the preparation or by animal inoculation. In every case of urogenital tuberculosis the primary seat of the tuberculous infection must be determined as soon as possible by cystoscopy or catheterization of the ureters. The cystoscopic picture is not in itself absolutely characteristic of tuberculosis. Nodules are also found in non-tuberculous disease. The surest prophylactic measure to prevent tuberculosis of the bladder is early extirpation of the diseased kidney before involvement of the bladder has taken place. Hence, the prognosis of bladder disease depends on whether the case is operable or not. In the great majority of cases spontaneous recovery of the bladder follows removal of the primarily diseased kidney. If the bladder does not clear up, it is often because the other kidney is also involved. The most suitable treatment of cases of this kind is a systematic tuberculin cure, supplemented by local treatment of the bladder with a weak bichlorid solution. Direct surgical treatment of a tuberculous bladder is of no avail and therefore not to be attempted.

DR. BRANSFORD LEWIS, St. Louis: The points I wish to emphasize are the greater confidence and hopefulness with which such cases are now contemplated, by reason of the more scientific and exact methods of diagnosis at hand which give recognition and treatment of the tuberculous bladder, and the relatively greater actual success derived from these sources, as well as from the more serviceable modern methods employed. The clinical evidences are of great importance because they attract the attention of the physician first consulted. Persistent and apparently inexplicable frequency of urination and microscopic blood in the urine, extending over a long period, should arouse a suspicion of tuberculosis. Other important symptoms are pain and excessive tenderness on instrumentation. Free use of local anesthetics should be made in all examinations. Marked diminution in the bladder capacity is a characteristic sign. The crucial test is the finding of tubercle bacilli in the urine. The urine must be obtained in such a way that there will be no possibility of contaminating it with smegma bacilli, as it is extremely difficult to differentiate between them and tubercle bacilli. Guinea-pig inoculation should be used in case of failure to find tubercle bacilli in the ordinary way. The cystoscopic picture is not always typical. Intravenous injection of silver nitrate is a valuable sign. The treatment is palliative and curative; the latter is hygienic, systemic, local and operative. So much good can often be accomplished by local or operative measures that it is doubtful if these cases should be given up for the purpose of sending the patient away for good air and hygienic influences. Iodoform emulsion is soothing and often healing; bichlorid of mercury is irritating; creosote and guaiacol in full doses are beneficial. Tuberculin is used in the same manner as for tuberculosis of other parts of the body. In using the air cystoscope, I think that I have observed some benefit from dilating the bladder with air. Removal of the diseased kidney is often followed by prompt improvement in or recovery from the bladder trouble.

Discussion on Bladder Tuberculosis.

DR. GUY L. HUNNER, Baltimore: Few diseases cause so much suffering and resist treatment so much as bladder tuberculosis. It has been my practice to suspect tuberculosis in every case in which bladder symptoms were complained of, until it was proved otherwise. It is easy to rule out the common causes of cystitis. Any case of cystitis that fails to react under the ordinary methods of treatment should come under suspicion. Disease of one or both kidneys is another symptom that would suggest tuberculosis, as an ascending infection of the kidney from ordinary cystitis is rare. The cystoscope is important. There is a class of cases in which both kidneys are involved and in which it is advisable to begin treatment at the bladder end, instead of trying to remove either of the kidneys. In some of these cases a vesicovaginal fistula gives great comfort, especially in connection with the tub-bath treatment. I agree with Guyon and Casper as to the efficacy of bichlorid of mercury in these cases. My experience has been that dilatation of the bladder with air breaks open the ulcers, and only aggravates matters. Bichlorid of mercury probably acts by setting up a cystitis which will improve the circulation. Against that is the fact that silver nitrate causes as much irritation, and at the same time makes these patients worse.

DR. WILLY MEYER, New York: There can be no question but that in probably more than 95 per cent. of cases tuberculosis of the bladder is a descending process, but I am firmly convinced that primary tuberculosis of the prostate, which so often follows a primary invasion by the gonococcus, does exist and is to be considered as a cause of tuberculosis of the bladder. Every means at our disposal must be exhausted in attempting to arrive at a correct diagnosis; careful history, careful examination of the 24-hour urine, inoculation of guinea-pigs, *x*-ray examination, cystoscopy and the various tests of the functional activity of the kidney. The *x*-ray should be used before cystoscopy, in order to exclude stone. Personally, I favor the indigo-carmin test, though none of these tests if taken alone is reliable. The finding of ulcers on the same side as the pain in the kidney is a fairly reliable sign as to which side the disease is on. It stands to reason that if early diagnosis can be made, the proper treatment is to remove the more diseased kidney as early as possible. It is not necessary to remove the ureter.

DR. E. M. SALA, Rock Island, Ill., reported a case in which he operated 6 or 7 years ago, in which one kidney was removed. This was followed by complete recovery from the bladder trouble. The ureter was left. The patient has remained well to date.

DR. LOUIS E. SCHMIDT, Chicago, reported two cases in which he was consulted on account of hematuria. In each case he advised nephrectomy.

The first patient, a medical student, refused operation and went under vaccine treatment. That was a year and a half ago. Three or four weeks ago he returned, with a history of nephrectomy ten weeks previous. Cystoscopy now showed his entire bladder to be tuberculous. The second patient consented to and underwent a nephrectomy at the time of diagnosis, and when seen a few weeks ago he was entirely free from symptoms of bladder tuberculosis. He cited these cases to show the value of early diagnosis and nephrectomy. In the treatment of the bladder after nephrectomy, and also in

cases in which the kidneys are so badly diseased that nephrectomy is not advisable, I believe that more attention should be paid to the hygienic and climatic treatment than to the local treatment.

DR. WILLIAM E. LOWER, Cleveland, Ohio: If it is true that tuberculosis of the bladder is generally secondary, and I believe it is, then no treatment of the bladder would be of avail until the primary focus of the disease has first been treated. In my experience, tuberculosis of the kidney is much more frequent in women than in men, the proportion being about three to one. I have tried all manner of treatment of the tuberculous bladder following nephrectomy, but have obtained the best results with Rovsing's method—injection of a 5 per cent. solution of carbolic acid into the bladder once a week, and allowing it to remain in the bladder from 20 to 30 minutes. I have noticed that the ulcers are not found around the ureteral opening, but in the rear and most sacculated portion of the bladder.

DR. KORSSELL, Chicago, reported a case of tuberculosis of the bladder which was not accompanied by tuberculous kidney:

The patient (a woman), after several weeks in bed and local treatment with iodoform emulsion, together with constitutional treatment, made a rapid recovery. The origin of the infection was probably a tuberculous peritonitis, the bacilli reaching the bladder through the urine. The urine was examined every day for a month, and no evidence of kidney disease was found.

DR. W. KARO: The evidence offered by Dr. Korssell is not sufficient to disprove kidney tuberculosis. In cases of tuberculosis of the kidney, the diseased portion of the organ may become walled off and recovery take place without interference. In my opinion, it is absolutely useless to treat a tuberculous bladder while one or both kidneys are affected. A little experience will enable one to differentiate between the smegma bacillus and the tubercle bacillus. The smegma bacillus is shorter and thicker and is differently grouped on the slide. Hygienic measures are good when they can be carried out, but they are not easily applicable among the poorer classes. When one kidney is tuberculous and the other healthy, nephrectomy is the chosen procedure. If both kidneys are affected, usually one is more so than the other, and after finding out by the phloridzin test and by determining the freezing point of the blood, and by every other means, which of the affected kidneys is in the worse condition, I would not hesitate to do a nephrectomy on the more diseased side. I prefer to leave the ureter to take care of itself. I have not had good results from suturing the ureter in the wound.

DR. B. LEWIS: It would be a source of danger for one to rely with confidence on his ability to differentiate between the smegma and the tubercle bacillus in a given specimen. It is true that there are differences, but I would rather place my reliance on the exclusion of the smegma bacilli from the specimen than on the differences in size, shape and grouping. I believe that the ureter should be left in, thus avoiding the additional risk, and it can be removed later if found necessary.

Tuberculosis of the Female Generative Organs.

DR. I. S. STONE, Washington, D. C.: In the vast majority of cases, disease of the female generative organs is secondary, although it may be impossible to find the seat or point of entrance of the infectious process. Repeated experiments and observations have failed to establish a definite method by which tuberculosis selects any organ such as the uterine adnexa for the implantation of the morbid process. I have found numerous instances of mixed infection, but I do not believe that a previous infection invited the implantation of tuberculous disease. Proof of the direct entrance of tubercle bacilli through the vagina into the uterus and thence to the tubes and peritoneum has not been obtained. Some gynecologists are inclined to believe that many of the erosions of the cervix attended with leucorrhea in virgins are due to tuberculosis. The diagnosis with tuberculin has rarely been tried. The median incision is advised, through which the peritoneum, mesentery and perhaps other abdominal contents may be examined and treated. This is important, because with the vaginal incision tuberculosis of the intestine or peritoneum may be overlooked. The curative results of hysterectomy, salpingectomy and oöphorectomy are nearly always satisfactory when there is but little extension of the morbid process to other organs.

Tuberculosis of the Peritoneum.

DR. F. B. LUND, Boston: The chief interest to the surgeon lies in the treatment. The progress of the surgical treatment of tuberculous peritonitis, from its accidental discovery, through its empirical stages to its present scientific position, is one of the most interesting bits of present-day surgical history. In 1862 Sir Spencer Wells opened a case of tuberculous peritonitis by mistake, and sewed up again. His patient recovered and remained well. Since then the operation of opening the abdomen for this condition has been practiced. König, however, first formally advised the operation in 1884. J. B. Murphy, in 1904, observed and was one of the first to appreciate, that in many of these cases in women the Fallopian tube is thickened and ulcerated, and that the end of the tube is open and discharging its contents into the abdominal cavity. Murphy also called attention to the fact that if the focus of supply to the peritoneum is a mesenteric gland or an appendiceal tuberculosis, the necessity for its removal is indicated, as is the removal of a tuberculous tube. Therefore, the rational modern treatment is to discover and remove the source of infection.

DISCUSSION ON PAPERS BY DRS. STONE AND LUND.

DR. GUY L. HUNNER, Baltimore: It is remarkable how certain patients with very marked tuberculous disease of the pelvic organs and peritoneum, who are in an extremely bad condition, will recover after suitable operative interference.

DR. EMIL G. BECK, Chicago: After removing the source of infection the peritoneum, as a rule, will take care of itself. But if tuberculosis of the peritoneum is far advanced it will not take care of itself, and in such cases before closing the abdomen I advise the injection into the peritoneal cavity of about 2 drams of bismuth paste. It is harmless.

DR. F. LUND: The danger of attempting local treatment of the peritoneum lies in the fact that one would be trying to produce adhesions, and that the results of the treatment can not be localized at the point desired. I believe that the greatest step forward was made when Dr. Murphy directed attention to the primary focus of the disease.

Tuberculosis of the Vas Deferens, Epididymis and Testicle.

DR. JOHN B. WALKER, New York: This condition is rare in infancy, and most common between the ages of 20 and 30. It usually occurs as a primary tuberculosis of the epididymis, and is associated with pulmonary tuberculosis. Gonorrheal epididymitis is recognized as a causative agent, various observers giving it as a factor in from 5 to 35 per cent. of cases. Trauma is also a predisposing factor. The bacilli gain entrance most frequently through the respiratory or the gastrointestinal tract, lodging in the mediastinal or intestinal lymphatic glands, whence they are carried through the circulation to the epididymis. The onset is generally gradual; there is a feeling of weight and discomfort in the testicle, with tenderness later; there is a dull, aching pain in the testicle; a urethral discharge is generally present, and at first there is a slight frequency of urination; later, tenesmus. The urine contains a small amount of pus, blood and mucus. The disease has to be differentiated from gonorrheal epididymitis, syphilis and neoplasms. The prognosis varies with the extent of the disease. Some cases remain local a long time. Removal of the organ often effects a cure, whether or not the prostate and seminal vesicles are affected. The general treatment is the same as in other forms of tuberculosis. Abscesses should be incised. When the condition is recognized early, epididymectomy is the chosen operation. It should be performed in all cases of localized tuberculosis of the epididymis. It is important to preserve the testicle whenever possible, on account of its internal secretion. Following epididymectomy the testicle does not atrophy, and the patient retains his sexual desire. Orchidectomy should be limited to cases of extensive disease of the organ. In many cases, even when the prostate

and seminal vesicles are affected, epididymectomy or orchidectomy will be followed by a subsidence of the prostatic and vesicular symptoms. Slight tuberculosis of the testicle may be depended on to heal spontaneously after removal of the epididymis. Castration is especially objectionable when both testicles are involved. At least a portion of one testicle should be left. Serious involvement of distant parts does not contraindicate operation, since it can be done under local anesthesia.

DISCUSSION.

DR. WILLIAM E. LOWER, Cleveland, Ohio: A review of the literature shows that one class of writers holds that infection of the epididymis and testicle is always a descending one, starting in the kidney, bladder, urethra and prostate, and later involving the epididymis and testicle. Another class claims that the infection of the genital organs is always primarily in the epididymis, the infection spreading in the direction of the normal secretions. The same difference of views exists as to the proper method of treatment. A number of surgeons insist on a very radical operation, removing the testicle, epididymis, vas deferens, prostate and seminal vesicles. Others advise only the removal of the diseased epididymis, or testicle if involved. Still another class advises a "let-alone" method or the use of some sort of injection treatment. From my own experience and analysis of the literature, I believe that the disease is practically always hematogenous in origin, and that the infection ascends along the vas deferens in the direction of the normal secretion. Formerly I did a radical operation, but now I simply remove the more diseased parts, and find my results are better by following this procedure. By simply removing the epididymis, together with the testicle if involved, the patient's convalescence is shorter, his resistance less reduced, and he responds more quickly to the general and hygienic measures which are so important to complete recovery.

DR. J. B. WALKER: I wish to emphasize the great importance of early diagnosis. Every patient in whom there is any abnormal condition of the testis should be examined by a competent surgeon. These cases are usually overlooked in the early stage of the disease, and within four or five months the whole of the epididymis is involved. If these patients are seen at the very beginning and condition skilfully diagnosed, the testicle itself can be saved.

SYMPOSIUM ON SURGICAL TUBERCULOSIS.

Surgical Tuberculosis.

DR. E. H. BRADFORD, Boston: The treatment of tuberculosis is dependent for its ultimate result on establishing an immunity which protects from further tubercular invasion. When the tissues invaded are put under suitable conditions, healing takes place and the affected tissues become cicatrized. The detritus of diseased tissues is either thrown off or becomes encapsulated. In tissues within the reach of surgical interference, the surgeon is to decide whether the healing process can be hastened by removing the affected tissue or the detritus. This depends on the tissues affected and their anatomic situation. These considerations are particularly important in bone tuberculosis and tuberculosis of the joints, because bone is a tissue that cicatrizes slowly, and the articulations are exposed to injury, which is unfavorable to the healing of the tissues affected by tuberculosis. In joint tuberculosis, it is especially important to see that the tissues are protected from trauma. The treatment of surgical tuberculosis consists in operative interference and the promotion of healing by protecting the tissues, in addition to furnishing such measures as are useful in combating tuberculosis in general.

Prevention, Diagnosis and Surgical Treatment of Tuberculous Sinuses and Abscess Cavities.

DR. EMIL G. BECK, Chicago: In this paper I desire to report 192 cases of sinuses and abscess cavities, including 19 cases of empyema pleuræ, treated during the past eight months. Results were as follows: In 125 cases, or 65 per cent., the lesions were healed; 53 patients, or 27.5 per cent., are improved and still being treated; in 11 patients, or 6 per cent., the condition is unchanged and they are still being treated; 3 patients, or 1.5 per cent., died in the period of eight months. These cases were collected from five hospitals, including the United States Navy and surgeons in different states. One hundred and forty-four of these patients were tuberculous, 48 non-tuberculous or doubtful. It is possible that the sinuses in some of the cases here reported as closed will reopen in the future. This, however, seldom occurred in the series. Should it occur, a repetition of the treatment is to be resorted to. Sepsis has not occurred in any of the cases, although a temporary rise of temperature of one to two degrees following the injection is not unusual. On the other hand, many patients who have had a daily rise of temperature of three or four degrees have often remained normal after the first injection. In my own series of cases I have not met with a true case of bismuth poisoning, although I have often noted mild symptoms indicating its absorption. One typical case was reported to me. From the history of this case, and from observations of other milder intoxications, it must be admitted that the absorption of larger doses of bismuth subnitrate may cause bismuth poisoning. One must not be deceived by the fact that large doses administered by stomach will cause no ill effect. There is a vast difference between the two methods of administration. Taken by the stomach there is little chance for absorption, because the drug passes through the alimentary canal in twenty-four hours, and bismuth is slowly absorbed. When injected into the pleural cavity, however, and retained there for weeks, the absorption is constant and accumulative. I have several cases on record in which the injection and retention of 100 grams of the 33 per cent. bismuth paste has not caused any ill effects. On the contrary, its effect on the patient was salutary. My records show that nearly all the patients who received bismuth injections have gained in weight, even if the sinuses did not close. The appearance of a faint blue line around the border of the gums is an indication that the bismuth injections have been carried to the safety limit. I advise injecting not more than 100 grams of the 33 per cent. paste, where it is likely to be retained. When larger quantities are required, percentage of bismuth should be reduced. Many factors undoubtedly contribute to the healing process, the bactericidal effect of the bismuth being, without doubt, the most prominent. In nearly every patient treated it has been observed that the injections are followed by the gradual diminution and often final disappearance of micro-organisms. Tubercle bacilli apparently are no exception. This fact was discovered in one case of tuberculous empyema, and has since been corroborated by another typical case. I have tried injections into the pleural cavity in a true case of tuberculosis of the lung, with pleurisy and effusion, and while the patient is still under treatment, there have been obtained very encouraging results. Whether the bismuth destroys the bacilli by its chemical action, or exerts a chemotactic power, has not yet been definitely determined. I am inclined to believe the latter is the case. The fact that the number of bacilli increases after the injection, and that they are found in the leucocytes, whereas before the injection they were outside of the leucocytes, supports the chemotactic theory.

Fresh Air Combined with Hyperemia in Management of Complicated Surgical Bone Tuberculosis in Adults.

DR. WILLY MEYER, New York: The beneficial influence of fresh air in surgical bone tuberculosis in children is generally recognized—not so in adults. In the latter cases, radical operation has been the usual treatment up to date, and will probably continue to be whenever the saving of time is a factor to be considered or when sufficient means are not at hand. Three cases of complicated bone tuberculosis in adults have demonstrated how much can be accomplished even in usually intractable cases, especially if combined with proper and faithful hyperemic treatment in its various forms. In sanatoria now designed for patients suffering from pulmonary tuberculosis, at least two wards, male and female, should be set aside for the treatment of adult patients with surgical bone tuberculosis who, for various reasons, can not or will not be subjected to operation. Of course, the attending physicians and nurses of such wards would have to master fully the details of hyperemic treatment.

How Minnesota Cares for Its Indigent Children Suffering from Tuberculosis of the Bones and Joints.

DR. ARTHUR J. GILLETTE, St. Paul, Minn.: In 1897, the state legislature of Minnesota first appropriated money for the care of indigent crippled and deformed children by the state. There being no precedent, the state was reluctant to take such a step. Since then a number of other states have made similar appropriations. At present, it ought not to be a difficult matter to secure money from every state in the Union to treat and educate this class of sufferers. It was found that about three-fourths of these crippled and deformed children were suffering from tuberculosis of the bones and joints. Many had complications of tuberculosis of the lungs, intestines, etc.; and a large percentage had abscesses and running sores, which not only contained bacilli of tuberculosis, but other infectious micro-organisms. Many of these children attended public schools, and no provision whatever was made to protect the well children in the schoolroom, or to prevent contagion in their own families. As it sometimes takes a number of years to cure a child suffering from tuberculosis of the bones and joints, the educational feature is an important one. The children must be educated, and they should have special instruction in lines of work which will be useful to them later, that they may be self-supporting. With the exception of a few states and a few large cities, no provision has been made to prevent contagion from or to treat persons suffering from tuberculosis of the bones and joints.

Discussion on Surgical Tuberculosis.

DR. HENRY W. FRAUENTHAL, New York, reported a number of cases in which he has successfully used the bismuth paste. He also spoke favorably of the Bier hyperemic treatment.

DR. B. H. WHITBECK, New York: Over a year ago a hospital was established at Sea Breeze, Long Island, and marked success is being met with in the treatment of surgical tuberculosis. The patients seem to do much better there than in the city hospitals, on account of the sea air.

DR. EUGENE CARAVIA, New York: These bone and joint troubles are only local manifestations of a general tuberculosis, and while bismuth paste, hyperemia, etc., are good for the local condition, they do not act on the general condition. I believe that something should be used which will act on the general condition, and feel that we have such a remedy in Cuguillere's vegetable serum.

DR. E. H. BRADFORD: I agree with Dr. Caravia that treatment of the general condition is more important than local treatment, but I believe that fresh air is the most important measure to be followed.

DR. E. C. BECK: It is true that while we would like to treat the general condition, yet that does not prevent us from treating the sinuses. In the absence of any absolute remedy for the general tuberculosis, we should treat the local condition as best we can.

DR. W. MEYER: We ought to individualize in treating tuberculosis; that is, not attempt to have any fixed way of treating every form of surgical tuberculosis, but treat each condition according to the indications in that case. In certain cases in which the lungs are also involved, the lung suction mask should be used in addition to the other treatment.

Tuberculosis of the Kidney.

DR. ARTHUR DEAN BEVAN, Chicago: The investigations of the last fifteen years have thrown much light on this subject. Formerly regarded as a rare lesion, to-day it is known as a not uncommon disease. Infection practically always occurred through the blood. Though the kidneys may be the first organs to give evidence of disease, tuberculosis of one or both is usually secondary to some obscure lymphatic lesion. Ninety per cent. of such cases are unilateral in the beginning. Later the disease may extend to other organs or to the opposite kidney. A distinct line should be drawn between urinary tuberculosis and genital tuberculosis. Urinary tuberculosis begins in the kidney and extends in the direction of the flow of the urine to the ureter, bladder, etc., while genital tuberculosis begins in the epididymis and extends to the vas deferens, prostate, seminal vesicles, etc. Early diagnosis is the most important thing, and depends on the finding of tubercle bacilli in the urine. A twenty-four-hour specimen should be examined. The smegma bacillus should be excluded by obtaining the urine by catheter and decolorizing with alcohol.

Cystoscopy may show redness, swelling and ulceration of the mouth of the ureter on the affected side. The ureters should be catheterized and the freezing point of the blood determined. If it is normal—from 0.55 to 0.57, or even as low as 0.59—nephrectomy can be safely done. The *x*-ray will differentiate from calculus. There are three methods of treatment: general hygienic, tuberculin and surgical. The hygienic treatment is very important, but the value of the tuberculin treatment has not been determined. In unilateral tuberculosis nephrectomy is the operation of choice. In bilateral cases the treatment should be hygienic; possibly tuberculin may be used, and certain palliative operative procedures, as nephrotomy and drainage, as may be required.

DISCUSSION.

DR. EMIL G. BECK, Chicago, asked Dr. Bevan whether in performing nephrectomy for tuberculosis of the kidney he removes the ureter when he finds it to be diseased.

DR. A. D. BEVAN: I think that the rule should be to dissect out as much of the ureter as possible without adding too much to the risk of the operation. I have no sympathy, however, with Kelly's proposition of removing the entire ureter and then turning the stump into the bladder; that procedure involves entirely too much danger to the patient.

Iodin Therapy in Surgical Tuberculosis.

DR. CESIDIO F. GUALANO, Naples: As a local measure, I recommend the use of a 5 per cent. solution of iodin in an artificial serum with guaiacol. This may be injected hypodermically, intramuscularly or intravenously. In most cases hypodermic injection is painful, and therefore intramuscular injection is preferred. The dose varies according to the age of the patient and the duration and intensity of the tuberculous process. A daily dose of 1 centigram may be increased to 3, 5 and more.

(To be continued.)

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Fifty-eighth Annual Session, held at Cambridge Springs, Sept. 14-17, 1908.

The Nature of Carcinoma in General and the Early Diagnosis of Gastric Carcinoma.

DR. JAMES M. ANDERS, Philadelphia, in the oration in medicine, gave a series of facts showing that the disease under consideration and microbic diseases as a class are identical as to cause and operation.

The grouping of features rendering a given case suspicious is not constant, and the closest scrutiny of all symptoms, signs and laboratory findings, as well as judicious balancing of the data entering into the previous history by an eminently skillful diagnostician, are absolutely necessary before a probable diagnosis can be reached. The general practitioner who fails to avail himself of an expert medical opinion in the most slightly suspicious case is scarcely alive to his professional obligations. It is important to recognize carcinomatous implantation on ulcer and either extirpation or gastroenterostomy should be done whenever ulcer proves rebellious to medical treatment. The study of the cases must be conducted on broad lines with the employment of the various refined diagnostic methods.

The Etiology and Pathogenesis of Gastric Ulcer.

DR. WARFIELD T. LONGCOPE, Philadelphia: Circulatory disturbances, mechanical injuries and chemical insult may each and all cause a defect in the gastric mucous membrane and thus lead to ulcer. The main question at issue is, why the healing of this defect, which takes place so readily under normal circumstances, is so difficult to effect in true gastric ulcer. Evidently some other factor is involved and at present the weight of opinion seems to be that this adjuvant factor is hyperchlorhydria.

DR. J. A. LICHTY, Pittsburg, gave the results of the treatment of 140 cases of gastric ulcer.

DISCUSSION.

DR. JUDSON DALAND, Philadelphia: I agree with Dr. Longcope that the excess of hydrochloric acid is a contributing cause of the persistence of these gastric ulcers. Gastric ulcers which under treatment recover symptomatically and later recur form a class in which operation is urgently required.

DR. WILLIAM L. RODMAN, Philadelphia: I think that practically every case of acute ulcer of the stomach is amenable to medical treatment. I am equally clear in my opinion that we can not expect to cure a chronic gastric or an indurated ulcer by any other than surgical means. The most popular method till now has been the simplest of all operations on the stomach—gastroenterostomy, but it is becoming less popular. The primary mortality following gastrojejunostomy as done at the present time is almost negligible. We should bear in mind the fact that one-third of all cancers in the body originate in the stomach, and that more than half of these cancers arise from neglected ulcers.

DR. JAMES M. ANDERS, Philadelphia: In the present state of our knowledge carcinoma of the stomach becomes largely a preventable disease by the timely removal of these chronic indurated ulcers. Whether a radical operation should be done in a given case is a question to be studied carefully by clinicians and surgeons together if possible. The presence of hyperchlorhydria is an indication that we should minimize the use of proteids and substitute other foodstuffs, thereby giving the stomach physiologic rest.

DR. W. T. LONGCOPE, Philadelphia: The experiments of Bolton have shown that in order to produce gastric ulcers it is absolutely necessary to have acid gastric juice in the stomach. If he washed out the stomach with alkaline solutions there was no ulceration whatever. If he increased the acid the ulcers were produced more readily.

Indicanuria.

DR. CHARLES REA, New York, gave the definition, history and different sources of indicanuria:

The principal source is the digestive tract above the large intestine. Its common complication of acute and chronic diseases is of much clinical significance, but is probably not generally recognized by the profession. The relation of microorganisms of the digestive tract to indicanuria, especially lactic bacteria, must be considered. Treatment consists of diet, antifermentative drugs and digestants, and, colonic flushings.

Relations Between Blood Diseases and the Digestive Tract.

DR. RALPH S. LAVENSON, Philadelphia: Lesions of the digestive tract may be primary or secondary to diseases of the blood. In leukemias, especially acute lymphatic leukemia, lesions of the digestive tract not infrequently occur secondarily to the leukemia. Progressive pernicious anemia is said almost invariably to be associated with a diseased condition of some portion of the digestive tract. Strict differentiation of these cases from those in which no lesions of the digestive tract can be determined, in my opinion is not justifiable. Great benefit and occasional cures result from energetic treatment directed against the faulty features in the digestive tract. The interpretation given by earlier clinicians of the association of chlorosis and gastric ulcer is probably erroneous. Cancer of the stomach is said not infrequently to produce secondary anemia, difficult of diagnosis from progressive pernicious anemia. The differential white count is frequently of value in making this differential diagnosis.

Factors Influencing the Clotting Time of the Blood.

DR. MYER SOLIS-COHEN, Philadelphia, pointed out the sources of error in the methods most frequently employed in measuring the clotting time of the blood.

In his method the blood is dropped on the lid of a German *stenderdish*, which is covered with the dish, being fastened on with a rubber band, the inverted dish is then placed in a pan of water kept at a temperature of 98 F. At intervals the covered dish is removed from the water and the contour of the drop observed. Coagulation has occurred when the profile is convex and no longer tear or pear shaped. Application of this same principle may be made to records obtained in diseased conditions so that comparisons may be made.

DISCUSSION.

DR. A. L. KOTZ, Easton: The practical deductions drawn by the older pathologists from the process described by Dr. Cohen were the number of times the patient should be bled and the quantity of blood abstracted. The knowledge of the clotting time of the blood would be especially valuable in cases of small persistent hemorrhage and in all diseases prone to hyperinosis and hypinosis. I endorse what Dr. Lavenson has said in his paper, and believe that for a satisfactory solution of the conditions and diseases of the blood we must carry our investigations along the line of physiologic chemistry.

X-Ray Diagnosis of Joint Tuberculosis.

DR. JAMES K. YOUNG, Philadelphia: The *x*-ray picture of tuberculous joint disease is characteristic, but should always be verified by laboratory findings, such as microscopic examinations, tuberculin inoculations, cultures and animal inoculations. The diagnosis of tuberculous joint disease in children is less difficult than in adults, but in the former the condition can be studied to better advantage by progressive plates, since the disease is more rapid. The *x*-ray examination is of value in differentiating tuberculous joint disease from other joint disease.

Compound, Comminuted Fractures of the Tibia.

DR. W. J. LOWRY, Carbondale: In treating this condition I smear my hands and the tissue about the wound with sterile vaselin and fill a small glass syringe with a mixture of carbolic acid, 95 per cent., glycerin 5 per cent., then plug all external openings in the wound, leaving only space in one portion to insert the tip of the syringe. I force this carbolic acid solution into the wound with sufficient pressure to reach every nook and cranny and pocket of soft and bony tissue. In from fifteen to thirty seconds this solution is followed in the same manner with about five times the volume of alcohol in a 95 per cent. solution of carbolic acid. The wound is then irrigated with sterile water and the usual dressing applied. To stimulate granules Balsam of Peru, sterate of zinc and iodin solutions are very helpful. Drainage is placed so as to invite the secretions from the wound and not dam them back to form pockets and cause absorption into the system. Proper application of suitable splints is important in these cases. For two years I have used a posterior and anterior plaster-of-Paris splint, with advantage over the old plaster cast.

Fractures of the Pelvis, with Special Relations to Urethral Injury.

DR. ALEXANDER G. FELL, Wilkes-Barre: Fracture of the bones of the pelvis is of frequent occurrence in the mining districts of Pennsylvania as the result of falling, or of the leg being caught between cars and pillars. All the bones are subject to injury, especially the ilium and pubis. The urethra may be injured in any portion, but in the membranous most frequently. It is impossible at first glance to determine the amount of injury; therefore, these cases require immediate and thorough examination as to the extent of injury, especially by urethra and rectum, and, in the female, by vagina. The most valuable information can be obtained by using the catheter before symptoms of extensive laceration are presented. If blood is present in the urine there is some injury to the parts above the prostatic portion, and it may be the kidney. If a soft catheter will not pass and the parts become clogged with blood, or if blood is passed through the urethra, there is probably some injury to the urethra. Restoration of the urethra can generally be accomplished by repeated passing of sounds, gradually increasing in size. Some of these cases are not seen by the surgeon until some time after the accident, with all the symptoms of peritonitis, and yet with immediate action, passing of a stomach tube to relieve vomiting, the continuous drop by drop enema without pressure and Fowler's position, good recoveries have occurred. The protection of the upper abdominal cavity and pelvic drainage counts as much in these cases as any other.

Discussion on Fractures.

DR. W. L. ESTES, South Bethlehem, believed that the fate of the limb in compound fracture depends largely on the first dressing. A first dressing should not be attempted without appliances for thorough asepsis and digital exploration should never be made. Reduction should never be attempted at the first dressing unless the surroundings permit of proper disinfection. I chisel off the ragged ends of bones so as to get rid of infectious material, then, after proper disinfection, the bone is drawn back into place.

DR. W. M. ROBERTSON, Warren: I do not believe that the surgeon ever sees a case of compound fracture that has not already been reduced by some one. In my experience not many infections have resulted from such reduction. Much dependence has to be placed in the resistance of the patient to sepsis.

DR. W. J. LOWRY: Many cases of compound fracture of the tibia become infected. Drainage should be provided at the first dressing.

DR. A. G. FELL: The first dressing is the important one. For getting rid of pus I use saturated solution of potassium permanganate, followed by corrosive sublimate as high as 1 to 500 in strength, and this by sterile water.

Some of the Recent Improvements in Operations for Tumors of the Breast.

DR. JOHN H. GIBBON, Philadelphia: The object of this paper is to popularize the Collins-Warren operation for cyst of the breast. I believe that far safer, more satisfactory and more surgical treatment is that of making the semilunar incision of Warren along the lower and outer periphery of the breast, turning the breast up and removing the cyst by a wedge-shaped incision. The incision was first recommended by Thomas of New York, but the further steps in the technic have been elaborated by Warren.

DISCUSSION.

DR. W. L. RODMAN, Philadelphia: The breast should not be sacrificed for a benign cyst, but the gland should be turned up, the cyst removed and the breast replaced. As the incision is made at the lower border, not even a scar is visible. The incision in the axilla should be made early in the disease so that if the case should prove inoperable operation can be stopped before the patient has been subjected to extensive operation. I keep the arm bound down to the side for twenty-four hours, and after that the patient may use it at will.

DR. C. P. NOBLE, Philadelphia: After a breast has been cut to pieces for the removal of multiple cysts, it is of no use for lactation, and that if the patient should have a child abscesses are apt to occur in such a breast. In patients with multipie cysts the breast should be removed.

DR. GIBBON: The function of a breast may be preserved after the removal of several small cysts, and it is important to conserve a functionating organ whenever possible.

The Surgery of the Cervical Triangle.

DR. CHARLES H. FRAZIER, Philadelphia, delivered the oration on surgery:

While lesions in the cervical region of surgical interest are almost too numerous to mention, this territory is one to which too little consideration is given by the surgeon. The refinements of technic, on which so much stress is laid in other special regions, as the abdominal or the cranial cavities, are not considered so essential in operations on the neck. This is probably due to the fact that with some exception the mortality is so low that the patient's life is not in question. In this age of specialism, which is unfortunate in many ways, this can not but lead to greater proficiency, the head and neck are coming to be regarded as a special field, with just as many possibilities and necessities for the perfection of a technic as have long since been recognized in the field of the abdominal or genitourinary surgeon. Rectal anesthesia is ideal for all operations on the head or neck.

(To be continued.)

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, held Sept. 9, 1908.

The President, DR. ALBERT M. EATON, Philadelphia, in the chair.

SYMPOSIUM ON EXOPHTHALMIC GOITER.

The Anamnesis of Patients With Exophthalmic Goiter.

DR. E. J. GILLESPIE BEARDSLEY: Exophthalmic goiter should be diagnosed earlier. Case records show many instances in which the disease has not been recognized until years of ill health have elapsed. Of 20 cases of which I have complete histories in only 2 did the symptoms begin abruptly. Of the other 18 patients, 12 had been more or less constantly treated for nervousness and gastric disturbances, while 6 had been treated for organic heart disease. Emerson's method of therapeutic test by small doses of thyroid extract in masked or undeveloped cases is advisable. A systematic examination should be made of each patient, particularly as to any alteration in the thyroid, and in regard to slight degrees of protrusion of the eyes. Tests should be made for muscular tremor and inquiries made concerning any change in mental attitude of the patient toward life and those about her.

The Ocular Symptoms of Exophthalmic Goiter.

DR. WILLIAM ZENTMAYER: In the majority of cases of exophthalmic goiter, at some period, the eye symptoms dominate the clinical picture, but they form so essential a part of the symptomatology that their consideration scarcely falls within the domain of the specialist. The brownish discoloration of the skin of the lids so frequently observed excludes the possibility of its being an accidental accompaniment. That epiphora may be the initial symptom of this disease is well established. Falling out of the eyelashes and of the eyebrows has been seen by several clinicians. Ocular palsies and nystagmus are among the exceptional findings. Absence of wrinkling of the forehead when the head is held down and the eyes raised has been observed by Jessup. One of the surprises of the disease is the absence of any characteristic changes in the fundus. The retinal vessels seem not to partake in the dilatation which the orbital vessels suffer. Retinal arterial pulse synchronous with the radial is exceptional.

Surgery of Exophthalmic Goiter in the Light of Recent Discoveries.

DR. W. WAYNE BABCOCK: The theory that exophthalmic goiter results from an affection of the cervical sympathetic has not been substantiated, and the results obtained by the formidable operations on the sympathetic trunks and ganglia do not encourage further surgical endeavors in this line. The modern surgical measures against exophthalmic goiter are based on the theory that whatever may be the primal exciting cause, the symptoms of disease are produced by the entrance into the blood streams of poisonous substances elaborated by the thyroid. The size of the gland as determined by palpation is no exact criterion of its functional activities. The great vascularity of a small goiter is a marked indication for operation. There is danger from the removal of too much of the gland or from excessive ligation of the nutrient vessels; a greater danger, that of tetany, lies in the removal or destruction of the blood supply of the parathyroids. Kocher, who reports the lowest mortality, is an advocate of local anesthesia, while almost as good results have been obtained by the Mayos under the use of ether. A small experience has impressed on me the value of scopolamin-morphin. The dangers of the operation, including immediate and secondary hemorrhage, are usually to be avoided by careful, methodical work; and those of secondary acute thyroidism, and the occurrence of postoperative tetany by the conservation of the parathyroids.

Results Obtained by the X-Ray Treatment of Exophthalmic Goiter.

DR. GEORGE E. PFAHLER: At least 51 cases of exophthalmic goiter treated by Roentgen rays have been recorded in literature, of which 42 were followed by good results. In 3 recorded cases no other treatment was given. Good results

were observed in some instances within forty-eight hours and almost without exception within a month, with complete recovery in most cases in from three to six months. Decided improvement may be expected in about 75 per cent. of cases. This improvement consists of an increase in weight and strength and gradual disappearance of the Basedow symptoms. Some improvement should be noticed within a month, and after from six to a dozen treatments. When the treatment is properly given there appears to be no danger. I can see no objection to recommending a trial of the treatment for a month in all cases.

Other Papers.

Papers were also read by Dr. Robert N. Willson, Jr., on "The Results of Medical Treatment of Exophthalmic Goiter," and by Dr. George P. Müller on "The Pathologic Changes in the Thyroid in Exophthalmic Goiter."

DISCUSSION.

DR. WILLIAM L. RODMAN: The muscular tremor is a valuable sign in the diagnosis of exophthalmic goiter. A certain percentage of patients, placed by Charles Mayo at 25, recover without treatment, or with very little. There is a great preponderance of the disease in women. In my opinion three fourths of the patients will be cured either by ligation of the vessels or by extirpation of a part of the gland. Dr. Mayo estimates that 25 per cent. of his patients are cured by ligation of the superior thyroid. The very vascular goiters are the ones in which ligation should be practiced, because it can be readily accomplished and in the event of failure to cure enucleation can be done. I regard the method of thyroidectomy advocated by Dr. Babcock as the best and safest, in that the parathyroids are not removed. I believe, however, that the danger of removing the parathyroids is exaggerated. I do not believe that operation under local anesthesia is safer than under general. Mayo's results under general anesthesia—a hundred operations without mortality in the last year—are better than Kocher's under local anesthesia. These good results are due in a measure to the judgment used in selecting the cases. These are not "picked" cases, however, for the worst come to Mayo, the proportion being two of exophthalmic goiter to one of simple goiter. The supplemental use of the *x*-ray in exophthalmic goiter promises less than in the treatment of simple goiter. While the entire gland had been removed without the subsequent development of myxedema, this possibility should be remembered and a partial thyroidectomy only be done.

DR. S. SOLIS-COHEN: I am not convinced of the necessity for surgical operation in exophthalmic goiter, though I admit that the operation can be performed without sacrifice of life. The 3 or 4 per cent. mortality, however, I regard as unnecessary. I feel that a better classification is needed, believing that pathologically there are more varieties than indicated by Dr. Müller. That hyperthyroidism supervenes on the disease, I have no doubt, but I recognize conditions militating against the theory of its being an original cause. Against the theory of intestinal intoxication producing the disease is the fact of the appearance of all the symptoms following fright. In a case seen in consultation I observed in the attempt to close the eyelid, a "hitch," or interrupted descent of the eyelid. I have seen no mention of this sign in literature. While 50 per cent. of the patients with exophthalmic goiter may recover spontaneously, the other 50 per cent. will require treatment. This must be hygienic in part, supplemented by certain drugs. The thymus gland is valuable; the adrenal gland is useful, but the extract of this gland must not be swallowed. I believe that a better division of cases will show that much of the discrepancy in regard to treatment is due to the fact that treatment applicable in one variety of cases has been wrongly applied in another.

DR. G. E. PRICE: Medical measures should be employed before surgical treatment is resorted to, thus putting the patient in a more favorable condition for operation. A limited experience has shown me the value of hygienic treatment, of a milk diet, and of rest. Galvanism has also been tried with good results.

DR. L. J. HAMMOND: There are some cases of exophthalmic goiter in which nothing short of surgical treatment is beneficial. That 50 per cent. of patients recover spontaneously surprises me. The sign referred to by Dr. Cohen I have seen reported by Dr. Boston and described as a lagging of the upper eyelid.

DR. WILLIAM ZENTMAYER: I have seen a description of the sign mentioned by Dr. Cohen in literature. It was shown that the eyelid halted only to resume its further downward course.

DR. W. WAYNE BABCOCK: The surgical treatment of exophthalmic goiter was based first on the conception that the disease is not always benign. In an article by Thompson, reference is made to the fact that some of his patients died after recurrence of all the symptoms of the disease. The fact that a patient appears very much better under a restricted form of diet, but will later relapse, is no indication that the treatment is beneficial.

KENTUCKY STATE MEDICAL ASSOCIATION.

Fifty-third Annual Session, held at Winchester, Sept. 23-25, 1908.

(*Concluded from page 1455.*)

SYMPOSIUM ON CARDIOVASCULAR DISEASES.

High Arterial Tension.

DR. H. H. ROBERTS, Lexington, emphasized the importance of giving more attention to this disorder, of making more careful examinations and more correct diagnoses of that class of patients who, in middle life, apply for advice and guidance as to their health. This can best be accomplished, he said, by advising patients to have regular systematic examinations made after they have reached the age of 40.

Dilatation of the Heart.

DR. C. G. DAUGHERTY, Paris: No class of cases furnish such spectacular results to the clinician and seem to make the practice of medicine so worth while as dilated hearts. Acutely dilated hearts in young athletes and mountain climbers recover frequently on purgation and rest alone. Patients with great lividity may receive life-saving treatment through the letting of twenty or thirty ounces of blood. Without it death speedily follows through the great embarrassment of the right auricle and lungs. Most patients require diffusible stimulants, such as aromatic spirits of ammonia, whiskey, camphor in equal parts of olive oil and ether by hypodermic injection, strychnin, gr. 1/30, atropin gr. 1/120 and nitroglycerin, gr. 1/100, to overcome the pulmonary edema. As soon as these stimulants have served the emergency the patient needs a brisk cathartic such as a saturated solution of Epsom salts. One ounce of compound jalap powder in dram doses night and morning, occasionally with 5 or 10 grains of calomel, must be given to unload the portal circulation. Without this preliminary purgation, patients seem to make little progress and we get little results from the sheet anchor in these cases—digitalis. Digitalis seems to do good in whatever form administered, with a lesion of whatever valve, myocarditis, fatty heart, etc.

Angina Pectoris and Pseudoangina.

DR. W. F. BOGGESS, Louisville: Treatment in angina is of undoubted value. Much can be done not only to relieve the symptoms, but to remedy the conditions which underlie them, and particularly is this so in arteriosclerosis. The treatment should consist, first, in the relief of immediate symptoms, and the remedy *par excellence* for the reduction of the tension in the vascular system is amyl nitrite, which, if given in sufficient doses, dilates the peripheral vessels and releases the tension in the heart. This drug is best given in doses of from five to ten drops by inhalation, generally by mashing in a handkerchief a pearl. It must be given for this immediate effect and should not be continued for any great length of time. Nitroglycerin is the next best remedy to the amyl nitrite. It must be given during the attack in larger doses than is ordinarily used, say from 1/50 to 1/25 of a

grain. It is also a remedy that can be kept up for a considerable length of time with great benefit in preventing subsequent attacks. The treatment of pseudoangina is prophylactic and medicinal. It resolves itself largely into the question of relieving the neurotic state.

Discussion on Cardiovascular Diseases.

DR. WILLIAM BAILEY, Louisville: We are dependent for nutrition on the circulation for the changes we term metabolism and for the elimination of toxins and other agents, and consequently there is much more to be considered than the action of the heart itself. It has been my purpose in teaching for many years to show that in feeling the pulse really there is much more than is ordinarily apprehended, and I have called attention to the fact that there is much more oftentimes in the tension of the artery than there is in the action of the heart itself. If I were directed to examine a man in materia medica and was only privileged to ask questions concerning one drug, I would select digitalis, because it is capable of doing more good where it is indicated, and more harm where it is not indicated, than almost any other drug. A satisfactory way to improve the pulse is to slow it and increase the tension of the artery in order better to carry on the functions. I am not satisfied that we secure better results by prescribing digitalis in combination with nitroglycerin. Additional heart power comes from each, but the influence on the capillaries is so opposite that while we are contracting the capillaries by digitalis, we are at the same time dilating them by glycerin.

DR. CURRAN POPE, Louisville: My own belief in regard to high arterial tension and its resulting arteriosclerosis, is that advanced by a noted authority, namely, that it commences in intoxication, continues in intoxication, and terminates in intoxication, and I mean by intoxication, intoxication in the form of poison, whether it be indigenous, arising from the body and within, or exogenous, coming from without. The best way to treat high arterial tension and arteriosclerosis is to prevent it. I have seen a number of cases of acute dilatation of the heart, and I have found that by instituting promptly two or three measures we can sometimes give instantaneous relief. A hypodermic morphin should be given at once, not only for its action on the cardiac apparatus, but because of its influence in quieting the nervous system and the relief of fear.

DR. TORALD SOLLMANN, Cleveland, Ohio: The effect of the circulation on the organ is proportionate not to the pressure of blood in the organ, and not to the amount of blood in that organ, but to the rate of flow through the organ. The important factor is to know how quickly the blood is renewed. It may be possible to raise the blood pressure by constricting the arteries and getting absolutely no increase in their work, but rather a decrease. We may obtain higher pressure by the action of the heart, but not necessarily by the constriction of the vessels. We get an increase of nutrition in the latter case if the constriction involves some area other than that in which we desire the blood supply. For instance, by the constriction of the splanchnic vessels we may obtain an increase in the skin. We can raise the blood pressure twice as quickly, if in addition to the action of digitalis on the heart, we invoke the action of digitalis on the vessels. It is important to remember in this connection that the simultaneous administration of filtrites makes it important to substitute strophanthus for digitalis, since it does not have a constricting effect to any great extent.

DR. H. D. RODMAN, Henderson: I have seen two deaths from acute angina in the last few years in people who never complained of anything that would lead me to think they were suffering from anything of that kind. One of them partook of a full meal of favorite vegetables, and died suddenly.

The Physicians of To-Day and To-Morrow.

DR. DUNNING WILSON, Louisville, chose this as the title of the address in medicine. He discussed tuberculosis, pneumonia, malaria, yellow fever, diphtheria, bubonic plague, tuberculins, vaccines and serums, infant feeding, diagnostic methods, and then had this to say with regard to a national department of public health:

When we contemplate the great loss of human life from preventable diseases, and consider that the government has not provided a department where investigations are carried on under bureaus having adequate appropriations, we are confronted with the oft-repeated assertion that the cheapest thing in the world is human life. We have institutions which are doing the finest original research along medical lines, but what is needed in order to make these discoveries of any real benefit is a clearing house or central governmental department of sufficient importance and dignity to occupy a place in the cabinet, where all experiments with their results may be properly correlated and verified, where the true may be divided from the false, the practical from the theoretical, and the facts from the fancies. When the physicians in America realize that a department of health may be interrogated regarding matters pertaining to the health of a community and careful investigations made possible, they will hesitate to advance any of their pet theories or make affidavits agreeable to the desire of their clients.

Education and Publicity.

DR. JOHN G. CECIL, Louisville, selected this as the subject for his presidential address:

Of all the interesting topics that might be introduced for consideration, there is none more pertinent at this particular time than the questions of education and publicity. Never in the world's history has the thirst for enlightenment by all classes been so great as it is to-day. The common sense of the people teaches them that they have the right to know the forces and conditions that work for good and for evil. Publicity is now the keynote. The day of mystery is no longer tolerated. This applies to things medical as it does to every other phase of human existence. Information concerning medical affairs is rapidly becoming common property, and it is important that this information should be correct. In order that it may become correct, it is absolutely essential that it emanate from the only source capable of supplying it in its virgin purity—the medical profession. From time immemorial medicine has been an occult science; a veil of mystery has hung about it. Its origin and traditions have fostered this impression; even the ethical principles governing its votaries, which are little more than the rules of common courtesy between physicians, have been misunderstood and misinterpreted. The attitude of dignified silence steadfastly maintained by medical men concerning the secrets of their calling have likewise encouraged the belief in its mysteries. Grave misapprehensions, for which the medical profession is in part responsible, have arisen, resulting in injustice to the profession, and in great harm to those dependent on and needing its counsel.

The medical profession must face this situation as it exists, and to it alone must we look for the solution. We can not dodge the responsibility; the tide has set in, and we must stem it or be carried away with it. Reduced to proximate principles, the reason for the existence of the profession of medicine is the preservation, promotion and improvement of health, the prevention of disease and prolongation of life. The medical profession must contend in the solution of the problems confronting it, not only with the ignorance and credulity of things medical, but with the immense activity of makers and dispensers of many articles in common use by it, such as medicines, special foods, medicinal waters, and especial treatments for every ill to which human flesh is heir.

The manufacturers and agents of these various wares assume to teach the medical profession and to furnish opinions for the public. The problem now awaiting solution is twofold, and the sooner we set our hands to it the better. The first essential is to raise the standard of medical education, and the other is to educate the public that it may be able to protect itself. When the people know what is the right thing to do they will do it. The unit in this system of educating the public is the doctor himself. In addition to continuing the work of uplifting and education among the members, every society should have an educational department or a bureau of publicity, whose duty it will be to educate the public and to disseminate knowledge of things medical.

Suggestive Therapeutics.

DR. W. E. SEXOUR, Bellevue: Education in mental therapeutics till now has been conspicuous by its absence, although experience teaches that it occupies as well-defined a place in relation to many diseases as drugs do in others. The purely scientific character of the medical school training, the mechanical and chemical plans on which physiology moves, the strictly material nature of all modern pathology, all tend to foster the belief that consideration of the psychic factor is useless and futile in result. The action of the mind on the body must be recognized as legitimate and natural, as it is well-nigh universal, and its beneficent excitement to curative action by mental therapeutics is not only legitimate on the part of every physician, but essential to all good practice. The mind can be so concentrated on a physiologic process as to stimulate that process to unsual activity, and thereby produce certain effects. The rational form of mental therapeutics in treatment by suggestion in the conscious state is rapidly gaining ground. Much of the success of suggestive treatment depends on the personality of the physician and his ability to make the suggestion effective.

Organic Serum Therapy.

DR. R. H. COWLEY, Berea: In the preparation of diphtheria antitoxin few difficulties arise and consequently diphtheria is the most favorable disease for serum therapy. The lesion in diphtheria, early in the disease and usually throughout its course, is localized in the throat or other easily accessible place, and so we have a toxemia and not a bacteriemia. The antitoxin is easily prepared in large quantities and is easily standardized. Most important of all, the local symptoms precede the general intoxication by hours and sometimes days. Under these circumstances, a sufficient amount of antitoxin administered early is sure to bring about a complete cure. Statistics on the value of tetanus antitoxin are hard to get, but from those available it appears that the mortality of acute tetanus has been reduced from 90 to 75 per cent., and that of chronic tetanus from 40 to 20 per cent. Tetanus antitoxin is of most value as a prophylactic. Epidemic meningitis is another disease favorable for serum treatment, only here, too, we meet with the difficulty that the first symptoms may indicate fatal intoxication. Dr. Flexner has thus far reported 33 cases treated by himself and by others under his direction. Of these, 295 patients recovered and 98 died, a mortality of 33 per cent.

Drugs in the Treatment of Disease.

DR. W. W. ANDERSON, Newport, pointed out some of the reasons for reaction against the use of drugs, as well as the good reasons that are sometimes pushed to vicious extremes:

Among the reasons to be placed to the credit of the profession are the progress of preventive medicine; the search for specifics, and a lessened use of drugs often carried to harmful extremes on account of the progress of surgery. A fourth cause of drug distrust and disease is the progress of physiologic experiments with drugs. A fifth natural source of drug disfavor is the revival and growth of mental therapy. A sixth cause for drug nihilism has been the progress of laboratory methods in diagnosis and the great interest taken in scientific diagnostic methods. Another and an important reason for the present disinclination to drug treatment is the commercial exploitation of drugs. This has led to the widespread practice of deception by the manufacturer, the wholesaler and the retailer as to the chemical nature or the therapeutic value of their products. In spite of excellent progress in the various lines of drugless treatment, there still remains a field of usefulness for this oldest, best-established and most widely practiced form of therapy.

Parallels of Bovine and Human Tuberculosis.

DR. W. A. WYMAN, Covington: I am not a special champion of pasteurization or the sterilization of dairy products, I realize that the public is slow to take the initiative and that sanitarians must therefore resort to some such expedient unless it is known that the cattle which furnish dairy products are free from tuberculosis. I believe that infected, dirty, raw milk is causing more unnecessary suffering, disease and death than anything tolerated by civilization.

Symptoms, Diagnosis and Medical Treatment of Inflammation of the Kidney.

DR. B. F. ZIMMERMAN, Louisville: Urinary antiseptics are indicated on theoretical grounds, and in some cases they have done good. I have found hexamethylenamin reliable. Opium must be given at times for the relief of pain. Quinin is highly recommended by some writers, but has been disappointing in its results. Frequent irrigations of the bladder with mild antiseptic solutions, when the cystitis is troublesome, should be employed. As in so many other conditions, prevention is worth more than all treatment.

Surgical Treatment of Inflammatory Diseases of the Kidney.

DR. DAVID BARROW: An operation on the kidney often requires surgical treatment of the ureter, either its exploration, incision to relieve obstruction, or removal for irreparable disease. The kidney surgically is approached from before or behind, transperitoneally or by lumbar incision. Much has been published by the advocates of the transperitoneal method, and Mr. Thornton advocates enthusiastically the abdomino-lumbar operation for stone in the kidney or ureter. For a large kidney neoplasm or for a large cyst, especially when the diagnosis is in doubt, and in traumatisms, the transperitoneal operation is often best. But in inflamed and septic conditions involving the kidney and ureter, practically all surgeons are agreed that the lumbar route is safer. In two cases I explored the kidney and ureters through an anterior abdominal incision, the symptoms and skiagraphs suggesting stones, but in neither case was a stone found. The inflammatory diseases of the kidney and ureters that may require surgical treatment are inflamed movable kidney, acute and chronic nephritis, inflamed cystic kidney, inflammation due to calculus of the kidney or ureter, tuberculosis of the kidney or ureter, and other infections of the kidney. In pyelotomy the incision is made in the posterior surface of the pelvis of the kidney, being careful to avoid a blood vessel that is sometimes so distributed, its ligation being necessary in case of division. After the stone is removed the incision must be carefully sutured with fine catgut and the rest of the operation completed as in nephrolithotomy.

Neoplasms of the Kidney.

DR. GEORGE A. HENDON, Louisville: The operative treatment of neoplasms of this organ may be divided into nephrectomy and nephrotomy. Nephrectomy and drainage should always be employed in cysts of the kidney, as such growths are bilateral and usually congenital. Siegrist has collected 64 cases of operation, 29 of carcinoma and 34 sarcoma, one not given. Nephrectomy was done 61 times; 32 patients died from the effects of the operation, 9 from recurrence and metastases, and 11 were still well after a period varying from 5 months to 2 years. Out of ten patients with malignant tumor operated on by Israel, 5 were without recurrence from 1 to 7 years after operation, and a sixth died without recurrence one year later of perforative appendicitis. Of 263 cases of nephrectomy collected by Kuester, 155 patients recovered, of which 28 per cent. were permanently cured, but only 9 were free from relapse at least three years. In my opinion, operative recovery depends entirely on the competency of the other kidney. Recurrence of malignancy depends on the extent of involvement at the time of the operation. Treatment to be effectual must be instituted before disease has unfitted the victim for a surgical risk of any character.

Diagnosis and Treatment of Diseases of the Accessory Sinuses of the Nose.

DR. GAYLORD C. HALL, Louisville, recounted the more recent work in the pathology and treatment of these diseases:

The baneful effects of sinus disease in children contracted during the acute exanthemata are now recognized. The widespread infection of the sinuses during epidemics of influenza and the fallacy of the statement "just a little cold in the head" are often the starting points of a sinusitis that may last for years. The significance of unilateral headaches, of

obscure attacks of facial neuralgia, of subjective odors formerly believed to be due to perversion of the sense of smell, attacks of vertigo, with a discharge into the nose and nasopharynx, all have found their explanation in a large percentage of cases in diseases of the accessory cavities of the nose. The pathology present is what is to be expected in any long suppurative condition, namely, degenerative changes of the mucous membrane often resulting in the formation of mucous polyps. There is involvement of the ethmoidal labyrinth. Decided changes are usually present in the middle turbinals. It may be polypoid in character. In certain cases it is cystic at the anterior extremity, effectually blocking drainage from the frontal sinus. As this structure is intimately connected with the drainage of the sinuses, one of the first steps is its removal, after which the sinus drains naturally and the membrane becomes normal. Removal of the anterior half of the turbinal facilitates drainage of the frontal sinus, and must be done preliminary to the Halle or Ingals operation. Removal of the posterior half opens up the sphenoid to operative attack, its ostium being slightly above and to the outer side of the posterior end of the middle turbinal. The removal of the middle turbinal likewise facilitates drainage from the antrum, and I invariably remove it before undertaking other operative measures.

Report of the Committee on Medical Defense.

The Committee on Medical Defense reported that it had read carefully the reports of similar organizations of Great Britain, Canada and various parts of the United States, and found that malpractice suits had been greatly decreased in number in those countries and states; that satisfactory protection had been given the members, and that in all cases the benefits had been undoubted. From this same research the committee believed that the work could be properly carried on for the amounts mentioned, namely, $5 for an entrance fee, and $1 a year from each member as dues.

The committee considered three points: 1. Will the formation of a defense union be beneficial to the physicians of Kentucky? 2. Is such a union practicable, and if so, what are the minimum rates necessary for good results? 3. Can this union have legal standing without coming within the regulations of the insurance laws?

As to the legal standing of the union, the best lawyers in the state had been consulted and assurance had been given the committee that the articles presented to county societies were in perfect accordance with the laws of Kentucky.

The various insurance companies charged $15 for the protection which the Defense Union will give for $1 (the entrance fee, $5, being paid once only), and, therefore, the committee did not expect anything other than the unanimous adoption of its report by the county societies.

This report was adopted by the society and recommended to the county societies for adoption.

Other Papers Read.

The following papers were also read: "Antepartum and Postpartum Hemorrhage," Dr. Edward Alcorn, Hustonville; "Electricity and Hydrotherapy," Dr. J. B. Kinnaird, Lancaster; "Laxatives in Pregnancy," Dr. John C. Moseley, Henderson; "Work of Jefferson County Milk Commission," Dr. B. C. Frazer, Louisville; "The Mechanical Prescription," Dr. T. Sollmann, Cleveland, Ohio; "Present Status of Therapeutics," Dr. W. Lucien Heizer, New Haven.

Officers Elected.

The following officers were elected: President, Dr. I. A. Shirley, Winchester; vice-presidents, Dr. M. Coombs, Louisville; Dr. B. S. Parish, Midway; Dr. J. C. Carrick, Lexington; secretary, Dr. Arthur T. McCormack, Bowling Green; treasurer, Dr. W. B. McClure, Lexington; orator in medicine, Dr. C. G. Stephenson, Becknersville; orator in surgery, Dr. J. F. Pythian; delegates to American Medical Association, Drs. Arthur T. McCormack, Bowling Green, W. W. Richmond, Hickman; alternates, Dr. A. D. Price, Harrodsburg, and Dr. H. K. Adamson, Maysville.

Louisville was selected as the place for holding the next annual meeting.

Medicolegal

Admissible Evidence Concerning and Responsibility for, Subsequent Dislocations.

The Supreme Court of Illinois says that in the personal injury case of Donnelly vs. Chicago Railway Company, the evidence was uncontradicted that the original dislocation of the plaintiff's right shoulder was caused by his being thrown when attempting to get on a car, and that previous to that accident he had never had any trouble with his shoulder or arm. He also testified that after that accident the same shoulder had been twice dislocated. He stated that the first of these subsequent accidents occurred when he was standing in a farm wagon, throwing out some straw; that the horses made a quick move, and, to prevent himself from falling from the wagon he grabbed a board, dislocating his shoulder thereby. The second dislocation, he said, occurred while he was driving a colt after its mother to change stalls in a barn; that the colt objected to going up a bridge into the barn, and, as he threw up his right arm quickly to scare the colt, the arm went out of its socket again. A physician was called as an expert witness, and asked a hypothetical question which fairly included the facts connected with the original and first subsequent dislocations of the shoulder, the question concluding: "Are you able to form an opinion from these supposed facts as to whether there was any connection between the first and this second dislocation?" His answer was that in his opinion "the first dislocation would predispose to a second." In answer to a second hypothetical question as to the third dislocation his answer was: "There was the same relationship as previously mentioned. A predisposition has been created to dislocation." It was urged that this testimony of the physician was so uncertain and conjectural that it should not have been admitted in evidence. But the court sees no error, and affirms a judgment in the plaintiff's favor for $1,500. It says that the question whether the original dislocation would have a tendency to predispose the shoulder to a second dislocation was a proper subject for expert testimony. It thinks it was correct practice for the court to permit the plaintiff to prove the facts with reference to these subsequent dislocations and submit the question of their cause, as one of fact, to the jury, under proper instructions, as was done here.

What Is Covered by Term "Leg" or "Arm"—Expert Evidence Excluded.

The Court of Appeals of Kansas City says that the case of Rogers vs. Modern Brotherhood of America was brought to recover on a benefit certificate which provided that should the holder "accidentally break his leg or arm" he should receive a certain indemnity. The plaintiff alleged that he broke his leg. The proof showed that the only bone fractured was the heel bones (os calcis). A physician introduced as a witness by the defendant testified that anatomists define the word "leg" as that part of one of the supporting limbs which extends from the knee to the ankle.

But the court holds that the definition of the word "leg" should not be controlled or even influenced by the meaning placed on it by specialists, since the word has a well-defined common meaning. Terms used exclusively by experts may require expert definition, but those referring to matters of common knowledge need not be so definite. Parties in contracting are supposed to use language in its commonly accepted sense, and courts and juries do not require the aid of experts to tell them what such language means. The trial judge should not have permitted either party to introduce evidence to define the word, but should have ascertained its meaning from the language of the contract and instructed the jury accordingly.

The agreement of the defendant was to indemnify the plaintiff in case he should "accidentally break his leg or arm." Evidently the parties intended to use the words "leg" and "arm" in the broadest sense. Medical men generally employ the word "leg" in its etymological and most restricted meaning of referring to the portion of the limb between the knee and ankle joint, and when they speak of the bones of the leg

they refer to the patella (kneecap), the tibia and fibula. It is too absurd for serious consideration to think that in speaking generally of an arm and leg the contracting parties intended to provide for a fracture of no other bones in the leg than those comprised in the middle section.

When one thinks of arms and legs as limbs, it is manifest that hands and feet must be included. The human body has four limbs, two arms and two legs, each divided into three sections, and it takes all three to make a complete limb. The term "arm's length" refers to the length of the entire limb, including the hand. "Leg bail," "on one's legs," "as fast as his legs would carry him," all refer to the complete limb, and necessarily include the foot.

Under the rule which requires the court to interpret the certificate most liberally in favor of the holder, it can not avoid the conclusion that, in providing indemnity should the member "break his leg or arm," the parties intended to cover fractures of bones of the limbs, whether such bones were in the hands or feet, or were in the upper or central divisions of the limbs. A fracture of the heel bone was covered by the certificate.

Drawing of Line as to What May be Basis of Expert Testimony in Injury Cases.

The Supreme Court of Illinois says that it was claimed in the personal injury case of Greinke vs. Chicago City Railway Company that the plaintiff was suffering from paralysis as a result of the injury which she received. She called as a witness a physician who had examined her, on the day before he testified, to qualify himself as an expert witness. He testified, over objection, that at the time of his examination of the plaintiff she was nervous; that there was a twitching and jerking of her hands; that there was a slight drooping of her left leg or left foot as she allowed it to hang over a chair; that the toes of the left foot turned in more than those of her right foot; that the step with the left foot was not as strong as that with the right, "not exactly a dragging but a suspicion of dragging"; that he tested the strength of her hands by taking hold of them with his hands and asking her to squeeze; that he noticed a difference in the strength of her hands; that one thumb was weaker than the other; that the examination was not made for the purpose of treating the plaintiff, but that he might testify as a witness in her case; that he could not say positively whether the jerking and twitching which he observed were voluntary or involuntary; that his impression was that they were involuntary; that the muscles which produced the conditions observed by him were voluntary and under the control of the plaintiff. It is held that in certain respects there was error in admitting this testimony.

The rule is well established in the state of Illinois that the declarations of the injured party, in a case like this, when made as a part of the res gestæ (essential circumstances of the case) or to a physician during treatment or on an examination prior to and without reference to the bringing of an action to recover damages for the injury complained of, may be introduced in evidence. But the declarations of the injured party made to a physician who has made an examination of such party with a view to qualifying himself to testify as a witness only are not admissible.

It has also been held that witnesses who are not experts may express their opinions as to the physical conditions of persons whom they have observed; that is, they may state whether, in their opinion, such persons are in good health, have the ability to perform work, whether they are suffering pain, are conscious or unconscious, in possession of their mental faculties, etc.

The rule, however, is well settled that a physician, when called as a witness, who has not treated the injured party, but has examined him solely as a basis on which to found an opinion to be given in a trial to recover damages for the injury sustained by the injured party, can not testify to the statements made by the injured party to him, or in his presence, during such examination, or base an opinion on the statements of the injured party. An expert witness called under such circumstances must base his opinion on objective, and not subjective, conditions.

If, therefore, it would have been improper for this physician to have inquired of the plaintiff as to the relative strength of her hands, or as to whether she could use her left leg as well as her right leg, or whether she could walk without dragging her left leg, and it would have been incompetent for him to have given to the jury the result of such interrogation by detailing to them her replies to said questions (as clearly it would have been), the court thinks it equally clear that he could not reach the same result by having her answer his questions by a nod of the head or by the pressure of her hands, or by asking her to sit on a chair, or to walk, and then giving to the jury the results of his observations.

The declarations of an injured party as to his physical condition, brought about as a result of injury, are self-serving, and, at best, hearsay evidence. Statements, however, made by an injured party which form a part of the res gestæ, or those made to his physician during treatment, constitute an exception to the general rule, and are admitted by reason of the fact that he will not be presumed to prevaricate at the very instant of his injury or while he is stating his physical condition to a physician from whom he expects and hopes to receive medical aid, nor will he be presumed to feign disease, pain or distress under those conditions in which he is ordinarily observed by strangers or his friends and neighbors. No such safeguards, however, surround him when he is being examined by an expert whom he has employed to examine him and to give evidence in his case which is about to be tried in court. To permit the injured party, while undergoing an examination by an expert in his employ, by jerks and twitches, by a pressure of his hand, by turning his toes in or by dragging one of his legs when walking, to thus make evidence for himself, and then to permit his expert to go before the jury and bolster up and strengthen by his opinion the self-serving testimony thus manufactured by the injured party, would open up the door wide for the grossest fraud, which might work on his adversary the most palpable injury.

The court does not intend to hold, however, that a physician may not be able, from an examination of an injured party, to form and express an opinion as to his physical condition and the probable cause which induced such condition, based on objective testimony alone, but what it intends to hold is that a physician who has not treated the injured party, but who has made an examination of the injured party solely with a view to testifying as an expert, should not be permitted to express an expert opinion to the jury based on subjective conditions, and then be allowed to fortify his opinion by stating to the jury acts of the injured party which could have been purely voluntary and under the control of the injured party, and which may rest on no other basis than the truthfulness of the injured party.

Rights Where One Physician Sells Out to Another.

The Court of Civil Appeals of Texas says that the findings of fact in the case of Yeakley vs. Gaston, though not so explicit as they might have been, admitted of the construction that Dr. Gaston did not undertake to sell to Dr. Yeakley his good will, but only agreed to sell his residence, his patronage of certain corporations, and to introduce Dr. Yeakley to his patients. This he did and moved away from B——, where both had up to this time been engaged in the practice of medicine. He was not, therefore, precluded from returning to B—— and resuming his practice; the good will not having been sold and no agreement having been entered into that he would not return, although it was contemplated by both parties at the time the trade was made that he would not do so. In the conclusions of law the lower court employed some language which seemed to indicate that the view was entertained that nothing short of an express agreement on the part of Dr. Gaston not to again resume the practice would be a bar to his doing so; but the authorities cited seem to this court to be sound in holding that the sale of the good will of a professional man carries with it the obligation that he will abstain from practice in future in the territory from which he thus binds himself to withdraw. Dwight vs. Hamilton, 113 Mass., 175; Beatty vs. Coble, 142 Ind., 329; Foss vs. Roby, 195 Mass., 292; Timmerman vs. Dever, 52 Mich., 34.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal.

October 15.

1 *Principles Underlying Treatment of Acute Intestinal Obstruction. C. L. Scudder, Boston.
2 Desirability of Instruction in Psychotherapy in Medical Schools and Its Introduction at Tufts. M. Prince, Boston.
3 Congenital Varices of the Right Leg and External Genital Organs. H. W. Goodall, Boston.
4 Acute Poliomyelitis Following Tonsillitis. K. Emerson, Worcester, Mass.

1. **Acute Intestinal Obstruction.**—Scudder divides intestinal obstruction into non-mechanical and mechanical. The non-mechanical group includes those instances of abdominal pain, distention and vomiting with constipation seen under the following conditions: 1, Associated with an abdominal contusion; 2, those obstructions associated with abdominal inflammatory processes, as, for example, appendicitis; 3, obstruction associated with pneumonia; 4, obstruction with acute nephritis; 5, obstruction encountered after clean laparotomy wounds, due primarily to trauma or unrecognizable sepsis.

He states that the foregoing are not the result primarily of mechanical conditions, but probably of infection, probably acting directly or indirectly on the neuromuscular intestinal mechanism. Such patients require, at least at the onset, rectal enemata, physostigma, if there is no gross sepsis, lavage of the stomach, the use of the rectal tube and possibly ileostomy or colostomy temporarily to relieve the physical condition. The mechanical group includes the obstructions caused by a band and an adhesion, a kink of the intestine, an intussusception, a twist or volvulus, a stone within the lumen of the gut, a new growth and tumor pressing on the outside of the bowel, by tumors growing in the wall of the bowel and by the various forms of hernia.

Scudder graphically describes the symptoms of unrelieved acute mechanical obstruction, and says that the anatomic mechanic conditions associated with intestinal obstruction formerly naturally attracted most attention and concern. He asks: "What happens in an acute intestinal obstruction? What changes take place locally in the bowel? What causes the great shock? Why is death so early?" Two notable factors are present in every intestinal obstruction. First, there is obstruction to the passage of the normal intestinal contents, and, second, there is an obstruction to the circulation in the wall of the gut. The symptoms are out of all proportion to the first factor, the intestinal stasis. He discusses the vascular changes and then the changes in the gut contents, consequent on the development of bacteria, including the paralysis of the gut which is occasioned by the direct action of the toxins within the intestine on the plexus of Auerbach. The development of gas increases the distention. After discussing the various theories of the cause of the symptoms present, Scudder states that the important and startling clinical fact in cases of intestinal obstruction is the profound intoxication, the toxemia, the general sepsis. The cause of this toxemia is an acute infection from the damaged gut. In the light of the later findings, what should be the treatment of a suspected case of acute intestinal obstruction? The changes in the bowel are so rapid that, the diagnosis having been made, action should be immediate. Delay may mean death. If there is doubt about the diagnosis, and the patient has abdominal pain without involuntary muscle spasm, is distended without a temperature, no cathartics should be given by mouth. More harm is caused by the common practice of administering cathartics in abdominal pain in which the diagnosis is uncertain than in almost any other way. No massage should be given to the abdomen for fear of causing perforation or of spreading the infection. The patient should be kept in bed and quiet. No food should be administered by mouth for fear of causing intestinal peristalsis and thus increasing the peritonitis. No water should be allowed to be swallowed. Very little water is absorbed directly from the stomach. The swallowing of water increases peristalsis. No morphin should be given until operation is decided on or the diagnosis is made, for morphin will conceal symptoms. If there is vomiting the stomach should be washed out with warm water. Early diagnosis permits early operative relief and early operation gives usually, though not always, a low mortality. It is not necessary to determine the form of obstruction; it is sufficient to realize that there exists a serious intra-abdominal operable intestinal lesion. Scudder describes the operative procedure and discusses the method of anastomosis after resection. He concludes with an analysis of 121 cases of acute intestinal obstruction at the Massachusetts General Hospital.

New York Medical Journal.

October 17.

5 *Achievements of Modern Surgery. F. L. Hupp, Wheeling, W. Va.
6 *Middle Ear Suppuration. W. S. Bryant, New York.
7 Neuromuscular Coordinations Having Educational Value. L. H. Gulick, New York.
8 Artificial Hyperemia and Its Therapeutic Application. A. B. Jackson, Philadelphia.
9 *Stomach and Intestinal Cases. S. Basch, New York.
10 Lepra Tuberosa. J. Kingsbury, New York.
11 Foreign Bodies in Trachea and Stomach. W. Lathrop, Hazleton, Pa.
12 Traumatic Insanity. J. W. Hartigan, Morgantown, W. Va.

5. This article was published in *West Virginia Medical Journal*, August, 1908.

6. **Middle-Ear Suppuration.**—Bryant discusses the diagnosis and treatment of middle-ear suppuration. The indication for section of the drum membrane is the presence of pus; the indications for mastoid operation in acute and subacute otitis media purulenta are extratympanic extensions, persisting a time after tympanic drainage has been established; for operation in otitis media purulenta chronica are extratympanic extensions of inflammation or other complications. In all complicated cases operative treatment gives quicker and better results than the expectant treatment. Cosmetic effect sometimes requires the closure of a postaural fistula. Perforation of the drum needs reparative help. Loss of parts of the sound-conducting mechanism needs mechanical substitutes. Most important is the posteonvalescent care of suppurative ears. If the drum mebrane is closed there is little to do. If a small perforation persists, an occasional inspection is needed to see that the drum cavity remains clear and clean. If there is a large perforation, the patient must be kept under observation at increasing intervals until the lining of the tympanum is white, glistening and free from the suspicion of crust formations or epithelial accumulations; otherwise a recurrence of suppuration may be looked for at any time. If there is a tendency for cholesteatomatous formations, the patient must be kept under observation until this tendency has been successfully overcome. With early treatment, prognosis indicates arrest of suppuration, restoration of hearing and preservation of life. A cessation of the suppuration, and an improvement in hearing is assured, except in the rare, fulminating cases in which a fatal issue may be expected. By treatment commenced before the loss of important structures, the hearing may be restored to normal. Fatal results are avoided by early treatment.

9. **Stomach and Intestinal Cases.**—In this article Basch describes in detail the apparatus referred to in his article in the preceding issue, which was abstracted in THE JOURNAL, Oct. 24, 1908, p. 1462.

Medical Record, New York.

October 17.

13 *Diagnosis of Peptic Ulcer. D. Roberts, Brooklyn.
14 *Rational Treatment of Splanchnoptosis. J. M. Taylor, Philadelphia.
15 The Personal Factor in Disease. B. Robinson, New York.
16 Abscess of the Lung, from Ascending Infection from Appendicitis. J. N. Hall, Denver.
17 Gonorrheal Septicemia, with Marked Cardiac Involvement. J. D. Thomas, Washington, D. C.
18 *Vessel Anastomosis by means of Rubber Tubing. W. Ward, New York.

13. **Peptic Ulcer.**—Roberts says that the typical ulcer pain develops from half an hour to two hours after eating, and gradually; is burning, boring, cutting or stabbing; is localized in the middle line close to the ensiform cartilage, pos-

sibly radiating to the back or precordium; is regular in occurrence and is induced principally by solid foods, rarely by water; lasts for some time, and is often terminated only by vomiting, ingestion of alkali or albuminous food. The tenderness is pronounced, and sharply localized over a small area in the middle line, between the ensiform cartilage and a point midway down to the umbilicus. Vomiting is not at all essential to the clinical picture. Regurgitation is often mistaken for vomiting. Actual hematemesis, taken with these other symptoms, is almost absolutely diagnostic. Black stools, while suspicious, so often result from constipation and a meat diet that they should not be accepted as evidence of bleeding. Belching, much mentioned of late as an important symptom, is not of itself suggestive, and if added to the history of pain, aids but little in the diagnosis. Hypochlorhydria is not rarely found; it is contributory evidence, but does not rule out carcinoma. In gastric ulcer, hypersecretion is an even more constant finding than hyperchlorhydria. Gastroscopy promises to be of value in occasional cases. The necessity of prolonged observations is emphasized.

14. **Splanchnoptosis.**—Taylor says that the causes of splanchnoptosis lie far back in the origins of growth and development and have a neurasthenic tendency as their source. Many factors blamed are usually efficient or instrumental only, and are not primary causes. We have to overcome cellular vitiation in several situations, among which are: 1, Loss of nutritive vigor in the vasomotor subcenters in the cord, through which the affected parts are innervated; and consequently, 2, impairment of nutrition in the internal structures which contribute to support; 3, relative weakness in the external abdominal muscles. Dietetic measures are indicated to overcome intestinal putrefaction. Replacement of the wandering viscus should be performed by the physician himself. The abdominal viscera are supported by the combined action of (a) the skeletal structures, (b) mutual adaptations among the structures within the cavity of the abdomen, (c) the diaphragm, (d) the omentum, and (e) the external abdominal walls. Measures must be taken to develop the supports, and to secure tone of the muscles of the torso. No muscles of the human body are so neglected as those of the diaphragm, external abdominal muscles, and those involved in respiration. Systematic breathing exercises are recommended. Artificial aid may be obtained by abdominal supports, among which Taylor describes that of Longstreth. Finally, he directs attention to the potentialities evoked by manipulating the paravertebral tissues, with the purpose of so stimulating the vasomotor subcenters that the activity of the local circulation shall enhance nutrition in the disaffected structure. By the rational treatment of splanchnoptoses and their underlying neurasthenic condition, many invalids can be rescued from lives of misery or from cruel limitations.

18. **Vessel Anastomosis by Rubber Tubing.**—Ward describes experiments in which rubber tubing, of the pure black gum variety, was implanted in the aortas of cats, and sutured to the vessel. One cat recovered perfectly and three weeks later was killed, the result of the autopsy showing that the transplanted segment of rubber tubing was completely thrombosed, and the circulation in the hind extremities had been maintained by an effective anastomosis between branches of the adrenolumbar and iliolumbar arteries, branches of the aorta given off just above and below the site of implantation. There was a thick zone of dense connective tissue encircling the rubber and adjacent portions of the aorta. Ward says that it is not difficult to imagine a surgical situation in which the immediate restoration of the circulation is imperative and in which the necessary living tissue is not at hand and can not be immediately obtained. Under these circumstances rubber tubing, in some cases at least, might be used to maintain the circulation temporarily.

Lancet Clinic, Cincinnati.

October 17.

19 *Currents and Counter-Currents in Medical Advance. A. R. Elliott, Chicago.
20 *Tropical Diseases and the Mississippi Valley. G. Dock, New Orleans.
21 *Present Status of Kidney Surgery. A. D. Bevan, Chicago.
22 Dante: Physician, (continued). A. G. Drury, Cincinnati.
19, 20, 21. Abstracts of these papers appear in our report of the meeting of the Mississippi Valley Medical Association.

American Journal of Medical Sciences, Philadelphia.

September.

23 *Relations of the Female Reproductive Organs to Internal Diseases. F. Müller, Munich, Germany.
24 *Specific Treatment of Typhoid. V. C. Vaughan, Ann Arbor, Mich.
25 *Hypodermic Use of Quinin and Urea Hydrochlorid in Diagnosis and Treatment of Acute and Chronic Malarial Infections. S. Solis-Cohen, Philadelphia.
26 Resistance of Diabetics to Bacterial Infection. J. C. DaCosta and E. J. G. Beardsley, Philadelphia.
27 Blood Pressure in Arteriosclerosis. R. D. Rudolf, Toronto.
28 Symptoms Attributed to the Myocardium in Reality Often of Peripheral Origin. L. F. Bishop, New York.
29 Persistent Patency of the Ductus Arteriosus. H. G. Wells, Chicago.
30 *Leukanemia. W. P. Elmer, St. Louis.
31 Pathologic Anatomy of Bronchial Asthma. A. G. Ellis, Philadelphia.
32 *Henry Gray, Anatomist. F. K. Boland, Atlanta, Ga.

23. **The Female Reproductive Organs and Internal Diseases.**—Müller takes up in detail those internal diseases which have been observed in connection with the physiologic processes of the female generative organs, namely, puberty, pregnancy, and the menopause, and discusses the significance of the pathologic processes in the female reproductive organs which give rise to medical conditions. He also considers the relation of certain internal diseases, especially kidney lesions, to the disorders of the female reproductive apparatus.

24. **Typhoid Fever.**—Vaughan thinks that the time has come to recognize that the mechanism of immunity is not the same in all infections and intoxications. There are at least three forms: 1, Antitoxin immunity; 2, phagocytic immunity; 3, lytic immunity. An essential difference between diphtheria and typhoid is that the poison of diphtheria is a soluble toxin, while that of typhoid is not, and if our definition of a toxin is a poison that may be used to generate an antibody to itself, the active ingredient in the typhoid bacillus is not a toxin because there is not the slightest evidence that in any animal it elaborates an antibody. Antitoxic immunity need not be looked for, because there is no antitoxin for the typhoid poison; neither need phagocytic immunity, because phagocytic action certainly is not a marked factor in the natural recovery from this disease. Vaughan has therefore made investigations, which he describes in detail, to see what we can make out of lytic action in the study of the nature, progress and recession of typhoid. He concludes that we shall never get an antitoxin for the treatment of typhoid comparable with that which we have for diphtheria, but that the residue may be of service, especially in preventing relapses, and if we can find some method of early diagnosis it may prove of value in aborting the disease.

25. **Quinin and Urea Hydrochlorid in Malarial Infections.**—The object of Solis-Cohen's paper is to recall attention to the following points: 1, The superiority of this salt over other preparations of quinin; 2, the periods of either six and one-half days approximately, or thirteen days approximately, during which patients previously exhibiting irregular recurrences of paroxysms, or regular quotidian, tertian or quartan recurrences, remain free from paroxysms following a single injection of about 1 gram (15 grains) of this salt; 3, the similarity between these periods of six and one-half and thirteen days, respectively, and the periods of cyst formation of sporozoite development in the sexual cycle of the parasite, as observed in the mosquito; 4, the diagnostic value of such injections, both in proving and in disproving malarial infection in cases in which parasites have not been discovered in the peripheral blood; 5, as a variant of the first point mentioned, the probable therapeutic superiority of this quinin salt in pernicious malaria is emphasized.

30. **Leukanemia.**—Elmer discusses this condition on the basis of a case which he compares with others described in the literature, and concludes that it is logical to suppose that while leukanemia has a definite clinical and hematologic picture, it is not a separate disease, but the result of some un-

known infection which in certain individuals might cause an anemia, in others a leukemia, and in others, who are especially susceptible, a clinical picture which combines the two.

32. **Henry Gray.**—This interesting biographic note of an anatomist of whom little is recorded, will be abstracted in the Department of Miscellany of THE JOURNAL.

American Journal of Surgery, New York.

September.

33 *Flatfoot. R. O. Meisenbach, Buffalo.
34 Case of Brain Abscess Associated with Chronic Purulent Otitis Media with Description of Operative Technic Followed. J. R. Page, New York.
35 Two Cases of Mastoiditis. J. H. Crawford, Atlanta, Ga.
36 Three Cases of Laryngeal Growth Removed by Direct Laryngoscopy. J. McCoy, New York.
37 Importance of Early Surgical Treatment of Gallstone Disease. G. E. Gavin, Mobile, Ala.
38 *Apparatus for Providing a Large Number of Visitors with a Complete View and for Securing Photographs and Moving Pictures of Operations. C. H. Duncan, New York.
39 Practical Points in Anesthesia. F. E. Neef, New York.
40 Lithotripsy as an Office Operation. J. K. Swinburne, New York.
41 New Rectal Speculum. G. A. Humphreys, New York.

33. **Flatfoot.**—Meisenbach bases his article on over 1,000 cases of flatfoot. He considers the congenital, and the acquired, or static, varieties. The former is by far the rarer. In the acquired, or static, flatfoot, standing for a long time in the abducted position, excessive superimposed body weight, faulty shoes, lack of exercise, excessive exercise, faulty muscular action, rapid growth, inequality of muscular action, paralysis of certain muscles, disease, general debility, trauma and primary faulty attitude, destroying the alignment of the ankle, knee, hip or spine, may all be causative factors.

At the age when growth is most rapid flatfoot frequently develops, and particularly in girls at puberty. Meisenbach describes the symptoms, and says that treatment consists essentially in restoring the foot to a normal position and retaining it so. The important factor is a correct diagnosis of the foot condition, which can only be made by the complete study of the individual case. Imprints of the feet are valueless and often misleading from a diagnostic standpoint. Many so-called cases of rheumatism are really static foot errors, as are also frequently growing pains. He describes the operative and non-operative treatment. The proper construction of a shoe he describes as follows: The cardinal features in a shoe best suited to ordinary wear should be a straight inner border on a moderately high last, the sole should not be too thick, and the toes should have enough space for action. The leather should be light and flexible. The heel should come forward slightly more on the inner than on the outer side, and should be of average height. The inside of the shoe should be concave at its heel.

38. **Apparatus for Rendering Operations Visible to Many.**—Duncan has devised a method of rendering operations visible to a body of observers by means of a camera suspended above the field of operation, the view from which, after being focused on a ground glass, is reflected horizontally by a prism on to a screen that separates the observers from the operation itself. The apparatus can also be used for photographing the operation as well as for the taking of moving pictures. Duncan claims for it the advantages that it provides to a body of visitors the same view of an operation as though each of them had his eyes directly over the field; it completely separates visitors from the surgeon and his staff, thus eliminating both the danger of contamination and the distraction of the operators; it saves the audience from the fumes of narcotics and the steam of sterilizers, and affords them cool fresh air without chilling the patient.

St. Paul Medical Journal.

September.

42 *Principle of Cerebral Decompression. J. G. Mumford, Boston.
43 *Shall We Use Vaginal or Suprapubic Drainage in Acute Diffuse Peritonitis in the Female? G. R. Curran, Mankato, Minn.
44 *Our Present Understanding of the Non-Tuberculous (Rheumatoid) Diseases of the Joints. J. E. Goldthwait, Boston.
45 Dementia Præcox. C. R. Ball, St. Paul.

42. **Cerebral Decompression.**—Mumford points out that, besides tumors, there are numerous causes of intracranial pressure giving rise to increased tension—abscess, sinus thrombosis and phlebitis, hydrocephalus, hemorrhage, meningitis, depressed bone fragments, and foreign bodies; several of which conditions give rise to general as well as local irritations. The patients do not often die from septic infection, loss of blood, or interference with the cortical function, but in the vast majority of cases from cardiac and respiratory paralysis, due to inhibition of the functions of the medulla and the basal ganglia, consequent on intracranial tension. Mumford presents three cases, which illustrate types of disease that may be cured by decompressive measures—types of disease in no way associated with those familiar intracranial tumors for which commonly decompression is employed: A case of Jacksonian epilepsy; a case of diffuse suppurative leptomeningitis; a case of profound mental alteration and depression, following trauma, without obvious lesion.

43. **Drainage in Acute Diffuse Peritonitis.**—Curran addressed twenty prominent surgeons as to the advantage or disadvantage of vaginal over suprapubic drainage in acute profuse suppuration of the abdominal cavity. The consensus of opinion was undoubtedly in favor of suprapubic drainage. This accords with his own view, when he says that for some years he has begun to feel that vaginal drainage is not only inferior to suprapubic, but in some cases actually is harmful.

44. **Non-Tuberculous Rheumatoid Joint Diseases.**—Goldthwait discusses those features of the rheumatoid problem in which there have been marked changes during the past few years. The first type showing progress is that designated infectious arthritis; the second, that in which the local joint lesions are due to strain, rather than to true disease; the third that in which peculiarities in the development of the scapulæ exist, and result in strain or irritation at the upper part of the spine and scapular regions. He discusses these three types in detail.

Northwestern Lancet, Minneapolis.

September.

46 *Actinomycosis, with Report of Case of Cervicofacial Type. J. H. Adair, Owatonna, Minn.
47 Points in Physical Examination. H. Z. Griffin, Rochester, Minn.
48 Shock and Its Treatment. C. S. Bigelow, Dodge Center, Minn.
49 Indications for Herniotomy in Children. E. S. Judd, Rochester, Minn.
50 Intrauterine Hemorrhage during Pregnancy and from Premature Separation of the Normally Implanted Placenta. F. L. Adair, Minneapolis.

46. **Actinomycosis.**—Adair discusses the history of our knowledge of actinomycosis and the characteristics of the disease. He describes a case in which the face and neck were affected. The treatment consisted of large doses of potassium iodid and a 40 per cent. ichthyol ointment, with swabbing out of the sinuses with saturated solution of potassium iodid and 95 per cent. carbolic acid. No effect was observed, but considerable improvement seemed to result from swabbing the sinuses and discharging points with a 10 per cent. mixture of formaldehyd in glycerin. Adair is skeptical as to the good accomplished by use of the potassium iodid. The free and uninterrupted discharge of the ray fungus colonies, with the lessening chances of reinfection therefrom, seems to offer a more reasonable explanation for the improvement noted in cases situated outside the cavities of the body, than does the administration of any remedy internally, while the high mortality seen in those cases occurring internally points to a retention of the infective material, with a consequent extension of the disease process. He believes that the only effect obtained from too active measures employed to eliminate the disease, such as the curetting of sinuses, excision of granulation tissue, and the like, is to carry the infection still deeper and wider, prolonging its life and activity and rendering more likely the occurrence of pyemia. The only external evidences of the disease remaining in this case are the two or three depressed and adherent scars, which still disfigure the face, mute witnesses of his ill-advised efforts forcibly to eradicate the infection.

American Medicine, New York.

September.

51 Tuberculosis of the Mucous Membrane of the Mouth. J. C. Sharp, New York.
52 Poliomeningitis Infantilis. E. K. Shelmerdine, Philadelphia.
53 Practical Points in Microscopic Examination of the Urine. L. W. Bremerman, Chicago.
54 Varieties of Tubercle Bacilli and Certain Allied Forms of Micro-Organisms. H. E. Lewis, New York.
55 *A Continent without an Orphan. B. Holmes, Chicago.
56 Transitory Disturbances of Consciousness in Epileptics. S. P. Goodhart, New York.
57 Sewage Menace in New York Harbor. Charles E. Woodruff, U. S. Army.
58 Osteomyelitis. E. W. Lee, New York.
59 *Sensism and Cognition. A. O'Malley, Philadelphia.

55. **A Continent Without an Orphan.**—Holmes describes the Australian method of dealing with orphans. Every fatherless and motherless child is the child of the state. The Children's Council, instead of placing them in institutions, provides a foster father and a foster mother. An officer of the council visits the infant every week, as does the council physician at regular intervals. Records are kept at the office of the council and the foster mother is paid a weekly stipend from the treasury of the council. As the child grows older, it is placed in a home under the same inspection. It goes to school and the teacher reports to the council as to a parent. Later, for a part of the year, it is hired out to work, the salary being deposited to its credit in the postal savings bank. Holmes asks whether America, which is richer than Australia, can not be as reasonable and as humane.

59. **Sensism and Cognition.**—O'Malley gives a philosophic discussion of the question, started by MacDougall in *American Medicine*, April, 1907, in which the inference was drawn of a ponderable and therefore material soul. Articles in continuation of the discussion appeared in the same journal November, 1907, and June, 1908.

Journal of the Indiana State Medical Association, Fort Wayne.

September.

60 *Case of Raynaud's Disease. J. Kolmer, Indianapolis.
61 Management of Normal Labor. J. M. Ketcham, Indianapolis.
62 Toxemia of Pregnancy. L. Burckhardt, Indianapolis.
63 Six Hundred Cases of Labor in Private Practice. H. A. Cowling, Muncie.

60. **Raynaud's Disease.**—Kolmer took the opportunity afforded by a case of Raynaud's disease terminating in gangrene, to investigate the relation of the ordinary pus cocci to the etiology of this disease. By determining the opsonic index to staphylococci and streptococci, compared with that of the average in four healthy persons, he found that the index was practically normal in the case of *Streptococcus pyogenes*, and *Staphylococcus pyogenes albus*, and *aureus*. In the case of *Staphylococcus citreus* the patient's serum showed an index nearly 8 per cent. higher than the normal serum. Kolmer infers that the process was not associated with any of the ordinary pus-producing bacteria. The article describes the pathology, symptomatology, diagnosis and treatment of the disease and reports one case in which the local gangrene was cured by amputation and the general condition relieved.

Chicago Medical Recorder.

September.

64 Constipation. A. D. Kohn, Chicago.
65 Successful Infant Feeding. T. G. Allen, Chicago.
66 Drug Actions in Gonorrhea and Syphilis. F. Baumann, Chicago.
67 Intranasal Method for Opening the Frontal Sinus and Establishing the Largest Possible Drainage. R. H. Good, Chicago.
68 *Diagnosis Under Artificial Light. A. C. Morrison.

68. **Diagnosis Under Artificial Light.**—Morrison discusses the illusions of color produced by various forms of artificial light and points out the difficulty entailed on physicians in using such illumination for purposes of diagnosis. He urges the great value of the acetylene light for medical use, and describes it as "daylight at night."

Journal of the Arkansas Medical Society, Little Rock.

September.

69 *Indications and Contraindications for Cardiac Tonics, Especially Digitalis. T. H Stucky, Louisville, Ky.
70 *Intussusception. St. C. Cooper, Fort Smith.
71 *Drainage. C. R. Shinault, Little Rock.
72 *Sciatica. G. E. Cannon, Magnolia.
73 Sporadic Cases of Diphtheria. C. C. Price, Douglas.
69 to 72. Abstracted in THE JOURNAL, July 18, 1908, p. 250.

Journal of the New Mexico Medical Society, Albuquerque.

September.

74 New Mexico Medical Society: Some Duties and Opportunities. R. E. McBride, Las Cruces.
75 Vaccine Therapy: Its Value to the General Practitioner. R. Smart, Albuquerque.

St. Louis Medical Review.

September.

76 Early Diagnosis of Tuberculosis. S. A. Knopf, New York.
77 Personal Experience in Gunshot Wounds. J. D. Seba, Bland, Mo.
78 Rupture of the Liver. J. F. Menestrina, St. Louis.

Alabama Medical Journal, Birmingham.

September.

79 Diagnosis of Extrauterine Pregnancy. G. R. Holden, Jacksonville, Fla.
80 Treatment of Puerperal Sepsis. E. M. Prince, Birmingham.
81 Sanitation of Small Cities. H. G. Perry, Greensboro.
82 Autointoxication or Biliousness. E. P. Lacey, Bessemer.

Archives of Otology, New Rochelle, N. Y.

June-August.

83 Case of Mastoiditis, Complicated by Purulent Meningitis, Encephalitis and Phlebitis of Sigmoid Sinus, Jugular Bulb, and Internal Jugular Vein. Operation. Recovery. J. F. McKernon, New York.
84 Mastoiditis in the Aged. H. A. Alderton, Brooklyn, N. Y.
85 Double Mastoiditis, Sigmoid Sinus and Jugular Thrombosis. S. Oppenheimer, New York.
86 Case of Recurrent Keloid of Scalp and Lobule of Ear. G. H. Cocks, New York.
87 New Instrument for Treatment of Disease of the Ear. E. P. Fowler, New York.
88 Sinus Thrombosis Following Removal of Granulation Tissue from the Middle Ear; Excision of the Internal Jugular Vein; Recovery. E. B. Dench, New York.
89 Case of Eustachian Catarrh with Hyperinflation. W. C. Braislin, Brooklyn.
90 Do not Remove the Thrombosis. F. Voss, Riga, Russia.
91 Foreign Bodies in the Nasal Cavity as a Cause of Maxillary Empyema. G. Krebs, Hildesheim.
92 Otitic Sinus Thrombosis and Pyemia. S. Alexander, Vienna.

Wisconsin Medical Journal, Milwaukee.

September.

93 Present Status of Medical Expert Testimony on Insanity. Plea for Corrective Legislation. C. D. Studley, Milwaukee.
94 Syphilis in the Light of Modern Research. S. Schiller, Milwaukee.
95 Use of Cocain as a Local Anesthetic in the Radial Operation of Inguinal Hernia. W. G. Nicholson, Green Bay.
96 Chronic Prostatitis. E. A. Fletcher, Milwaukee.

Laryngoscope, St. Louis, Mo.

September.

97 Malignant Disease of the Nose. E. N. Holmes, Boston.
98 Treatment of Fractures and Depressed Deformities of the Nose by a New Method with the Use of a Combined Bridge and Intranasal Splints. W. W. Carter, New York.
99 Hyperesthetic Rhinitis (Hay Fever) with Suggestions for Its Rational Treatment. O. J. Stein, Chicago.
100 Physiologic Hearing Tests. T. M. Stewart, Cincinnati.
101 Climate of Colorado Etiologically and Therapeutically Considered. J. A. Patterson, Colorado Springs.
102 Climate of the North and Northwest in Its Etiologic and Therapeutic Relation to Diseases of the Nose, Throat and Ear. N. Spratt, Minneapolis.
103 The Headache of Non-Suppurative Frontal Sinusitis. F. Brawley, Chicago.
104 Technic of Adenoidectomy and a Perfected Curette. F. G. Stubbs, Chicago.
105 Status Lymphaticus, with Particular Reference to Anesthesia in Tonsil and Adenoid Operation. W. H. Roberts, Pasadena, Cal.
106 Surgical Emergencies Associated with the Tuberculous Larynx. C. P. Grayson, Philadelphia.
107 Removal of a Foreign Body, a Grain of Corn, from the Trachea of Child, 6 Years Old. J. H. Bryan, Washington, D. C.
108 Angiomyxosarcoma of Larynx with Expulsion of Large Tumor. L. R. H. Gantt, Spartanburg, S. C.
109 Supplemental Report of a Case of Xanthoma, with Exhibition of Patient. J. E. Rhodes, Chicago.

American Journal of Orthopedic Surgery, Philadelphia.

August.

110 Present Needs of an Orthopedic Service. H. L. Taylor, New York.
111 Albert Hoffa. R. B. Osgood, Boston.
112 *New Treatment for Old Tuberculous Sinuses. J. Ridlon and W. Blanchard, Chicago.
113 Influence of Weight-Bearing on Treatment of Tuberculous Hip-Joint Disease. V. P. Gibney, New York.
114 *Tuberculin in Orthopedic Practice. C. Ogilvy, New York.
115 *Tuberculin in Orthopedic Surgery. J. J. Nutt and T. W. Hastings, New York.
116 *Further Report on the Treatment of Joint Tuberculosis with Marmorek's Serum. A. H. Freiberg, Cincinnati, Ohio.
117 *Blastomycosis: Report of Two Cases Resembling Bone Tuberculosis. E. W Ryerson, Chicago.
118 *Cause of Atrophy in Joint Disease. A. T. Legg, Boston.
119 *Necessity for Early Orthopedic Treatment in Poliomyelitis. W. R. Townsend, New York.
120 Treatment of Lateral Curvature. E. H. Bradford and R. Soutter, Boston.

112, 114 to 118. Abstracted in THE JOURNAL, July 25, 1908, pp. 342, 343, 344.

119. Abstracted in THE JOURNAL, Aug. 8, 1908, p. 527.

Colorado Medicine, Denver.

October.

121 *President's address, Colorado State Medical Society. H. B. Whitney, Denver.

121. Abstracted in THE JOURNAL, Oct. 3, 1908, p. 1177.

Journal of Nervous and Mental Diseases, Lancaster, Pa.

October.

122 *Confusional Insanity and Dementia Præcox. P. C. Knapp, Boston.
123 *Apraxia, with Autopsy. J. H. W. Rhein, Philadelphia.

122. Abstracted in THE JOURNAL, July 11, 1908, p. 164.

123. Abstracted in THE JOURNAL, June 20, 1908, p. 2105.

Buffalo Medical Journal.

October.

124 Treatment of Acute Gonorrhea. B. F. Senftenberg and J. S. Kreshover, New York.
125 *Diagnosis Under Artificial Light, Its Difficulties and a Solution of the Problem. A. C. Morrison, Chicago.
126 Compact Ether-Freezing Microtome. E. C. Mann, Buffalo.

125. This article also appears in the *Chicago Medical Recorder*, September, 1908; see abstract No. 68, p. 1552.

Journal of the Kansas Medical Society, Kansas City.

October.

127 Local Anesthesia. M. T. Sudler, Kansas City.
128 Bacteriology and Pathology of Acute Rheumatism. C. C. Nesselrode, Kansas City.
129 Fibroma of the Abdominal Wall. G. H. Hoxie and W. K. Trimble, Rosedale, Kan.
130 *Sociologic Aspect of Gonorrhea. S. C. Emley, Iola, Kan.

130. Abstracted in THE JOURNAL, May 30, 1908, p. 1828.

Journal of the Medical Society of New Jersey, Orange.

October.

131 *Early Recognition and Early Operation in Acute Intestinal Obstruction. R. Curts, Paterson, N. J.
132 Excision of the Stomach for Carcinoma. F. Staehlin, Newark.
133 Reflex Gastric Symptoms a Factor in Surgical Diseases of the Abdomen. J. P. Reilly, Elizabeth, N. J.
134 *Tetanus, Its Prevention and Treatment. J. H. Underwood, Woodbury, N. J.

131. Abstracted in THE JOURNAL, Aug. 22, 1908, p. 700.

134. Abstracted in THE JOURNAL, Aug. 22, 1908, p. 699.

Bulletin of the American Academy of Medicine, Easton, Pa.

October.

135 *Women in Business as Affecting Home Life and Marriage. A. S. Lobingier, Los Angeles.
136 *Women in Business as Affecting Health. L. D. Bulkley, New York.
137 *Women in Business as Affecting Health and Morals. N. Bridge, Los Angeles.
138 Woman and the Future of the Race. O. Juettner, Cincinnati.
139 *Female Labor as a Factor in Social Life. A. L. Benedict, Buffalo.
140 *Modern Methods of Education and Their Effects on the Health of the Race. H. Hoxie, Kansas City.

135 to 137, 139, 140. Abstracted in THE JOURNAL, Aug. 1, 1908, p. 429.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

October 3.

1 *Recent Advances in Science and Their Bearing on Medicine and Surgery. Sir P. Manson.
2 *Treatment of Inoperable Cancer. H. Morris.
3 *Pregnancy, Parturition, and the Puerperium After Ventrifixation (Hysteropexis Hypogastria). Sir W. J. Sinclair.
4 Cancer of the Colon. H. S. Clogg.

1. **Recent Advances in Science.**—Manson points out the appropriateness of tropical medicine as a theme for the Huxley lecture, from its connection with natural history. He discusses the limits that define tropical diseases and describes the constitution of an ideal school of tropical medicine. He notes that certain blood-haunting protozoa requiring an insect or other arthropod vector make use of that vector as a medium for sexual development, and asks whether this may not be regarded as a general law, applicable to all such blood-haunting protozoa. He summarizes the arguments pro and con, and favors the former. He then submits a hypothesis as an explanation of the double life, if it may be so described, of so many and so widely separated parasites, including protozoa, nematodes, trematodes and cestodes, a hypothesis that seems to harmonize the facts and to conform to the doctrine of evolution. The hypothesis is as follows: Vertebrates, arthropods, molluscs, helminths, protozoa have all of them sprung from a common ancestor, or if not from one common ancestor, from similar ancestors. Very early in the growth of the family tree a certain originally free organism became at first intermittingly, then finally and permanently, parasitic on another organism. In time a definite host and parasite relationship was established between the two. From the original host varieties, species, genera, and so on were gradually evolved. Concurrently with this evolution in the host, the parasite, just as its host had done, adapting itself to its changing environment, evolved new varieties, species, genera, etc. In the course of these evolutionary processes there came a time when, say, the insect and vertebrate strains began to diverge. A certain organism was parasite on the common insect vertebrate ancestor. The process of evolution in this host ancestor being necessarily very gradual, the parasite—as is the case with many existing parasites—was capable of adapting itself to the closely related varieties of the host, among others to the insect-resulting strain and to the vertebrate-resulting strain. Divergence in these host-strains continuing, varieties became species, species genera, and so on, until insect and vertebrate, as they exist at the present day, were evolved. In the early stages of the evolutionary process the parasite could live in either vertebrate strain or insect strain of host indifferently, but there came a time when it was often more to the advantage of the parasite to pass its sexual life in the ancestral insect strain, its asexual life in the ancestral vertebrate strain. In the process of evolution, this at first more or less accidental habit—the expression "optional habit" can hardly be applied to a parasite—became fixed and has been transmitted, so that now the sexual life of the malaria parasite is passed in the mosquito, its asexual life in man.

2. **Inoperable Cancer.**—Morris discusses palliative operations and other methods of treatment, and then takes up the trypsin treatment at considerable length. The following ferments have been tried:

Amylopsin, in addition to trypsin, suggested on embryologic grounds (Beard), liver ferment (von Leyden and Bergell), placental tryptic ferment (Bunn, Liepmann), papayotin (Branch, Lucas), and lastly, erepsin—which is contained in the intestinal mucous membrane (Cohnheim), but is common to all organs and tissues (Vernon)—has been recommended and is being experimented with by Shaw-Mackenzie.

Only trypsin has had sufficient time for any number of cases to be reported, and the interval elapsed hardly justifies definite conclusions from clinical data alone. Morris discusses the contradictory opinions of investigators in England, America and Germany. While trypsin speedily removes sloughing tissue and provides a clean surface free from sepsis, thus adding to the comfort of the patient, he does not find sufficient evidence in support of more radical results. He discusses Beard's claims of the cure of cancer in mice, and mentions experiments which showed that trypsin treatment was powerless to prevent inoculated tissue from taking.

3. **Pregnancy and Ventrifixation.**—Sinclair emphasizes the fact that ventrifixation is suitable only for women at the child-bearing period of life; the atrophying uterus after the menopause requires other methods of treatment. Schultze's process he dismisses with a word. Massage is not suitable with a view to permanent cure. Schücking's operation is timid, futile and dangerous. Sänger's was neither thoroughly efficient nor permanent. Alexander's still holds its place with many, but Sinclair regards the number and variety of recent modifications as fair indication of disappointment. Sinclair abandoned the operation after forty-five cases. He considers the operation of ventrifixation, if efficiently done, the best for the treatment of chronic retroflexion of the uterus in women at the child-bearing period. He discusses the various operations for ventrifixation and ventrisuspension, and de-

scribes his own method. He reports seven cases of child-bearing subsequent to ventrifixation, and states that the operation has stood the tests of efficiency in nearly 300 cases. For prolapse the operation must be supplemented with colporrhaphy.

British Medical Journal, London.

October 3.

5 Fifty Years of Medical Education. A. Macalister.
6 *Radical Abdominal Operation for Carcinoma of the Cervix ("Wertheim's"). C. Berkeley and V. Bonney.
7 *Oxygen and Muscular Exercise as a Form of Treatment. L. Hill and M. Flack.
8 Case of Hereditary Brachydactyly. P. W. Matthew.
9 Diagnosis and Treatment of Cancer of the Breast. Sir W. Cheyne.
10 Diagnosis and Treatment of Malignant Disease of the Breast. H. J. Stiles.
11 *Treatment of Fractures by Mobilization and Massage. J. Lucas-Championnière.
12 Puncture of the Brain. H. Tillmanns.
13 Technic of Tarsectomy for Talipes. Ch. Willems.
14 Section of the Posterior Primary Divisions of the Upper Cervical Nerves in Spasmodic Torticollis. R. Kennedy.
15 Simplified Method of Performing Prostatectomy by the Combined Routes. J. L. Thomas.
16 Selection of the Method of Operating in Cancer of the Rectum. D. Drew.
17 Cholecystenterostomy in the Form of a "Y." A. Monprofit.
18 Indications for Nephrotomy and Nephrectomy. D. Newman.
19 Gastrostomy. W. Evans.
20 Indirect Treatment of Disease of the Epididymis and Testicle. E. M. Corner.
21 Cases of Hematuria. A. Fullerton.
22 *Painful Displacement of Ribs. A. DePage.
23 Technic of Cancer Operations with Reference to the Danger of Cancer Infection. C. Ryall.
24 Surgical Statistics; a Plea for Uniform Registration of Operation Results. E. W. H. Groves.

6. Operation for Carcinoma of Cervix.—Berkeley and Bonney discuss in detail certain points in relation to Wertheim's operation, namely, the separation of the bladder and of the ureters, the removal of the parametric tissue and glands, the control of hemorrhage, cancer infection of the operation area, septic infection thereof, also of the bladder and abdominal wound and duration of the operation. With regard to results they say that of the fifteen patients who recovered from the operation, fourteen are alive and show no signs of recurrence. The time that has elapsed, however, is so short that no stress is to be laid on this. Rather they would point to the improvement in the aspect of the patients, their increase in weight, and the pleasure and relief with which they view their escape from their distressing symptoms, temporary though it may be. These facts in themselves constitute a strong plea for the operation. They discuss the justifiability of the operation and its status from a pathologic standpoint and give a tabular report of their eighteen cases, with three deaths.

7. Oxygen and Muscular Exercise.—From further observations on athletes, on himself and on horses, Hill concludes that oxygen inhalation followed by or accompanying exercise is a most active and efficient form of treatment. He describes various experiments, and says that there can be no question that the influence of oxygen inhalation is very great on the untrained or fatigued man. It enables a man to increase considerably the metabolism of his body, and should be of value, therefore, in the treatment of people fat and scant of breath, and those who overeat and take too little exercise, and in cases of emphysema and of heart disease treated by graduated exercise. Possibly it may find a use in tropical climates to make exercise easier, and in men exhausted by the day's mental work and worry, and who want a spin on their bicycle to make the blood circulate and the appetite good. To make the trial of oxygen easy and simple, he has constructed a little apparatus—a combined generator and inhaler, which he describes. With this, oxygen can be made almost as easily as soda water with a gasogen. Flack adds an account of Wolffe's swim across the English Channel. When the swimmer would have given up from exhaustion, about an hour and three-quarters after the start, oxygen was first administered, with wonderful restorative results. After this oxygen was administered every quarter of an hour. The result, though barren as regards the effect of oxygen in staving off fatigue, is regarded as demonstrating its great value in relieving fatigue, even of the most advanced type.

11. Treatment of Fractures.—Lucas-Championnière lays down the principle, that absolute fixation of the fragments is not the most favorable condition for the phenomena necessary to repair at the site of a fracture. A certain amount of movement is the necessary condition. This movement is necessary to the vitality of the bone. A long experience has enabled him to demonstrate this clinically. Movements, immediate and graduated, with massage are the prime elements of his method of treatment. He discusses the effect in obviating pain and relieving muscular irritability, and describes the character of the massage and mobilization, which he says is applicable in all cases of fracture, though the method is of more value in articular fractures than in others. In certain cases, such as fractures of the leg, the elbow, the olecranon, and the clavicle, this method also assists in reduction. Simple mobilization should consist of slight and gradually increasing movements of the joints most remote from the seat of fracture. The movements, begun gently, should be at first passive. As soon as the cessation of pain allows, active movements are called for. They ought always to be limited. The only reproach that can be brought against the method is that, after articular fractures the pain disappears before consolidation has taken place and the patient wishes to walk or to use his arm too soon.

22. Painful Displacement of Ribs.—Depage describes a special pathologic state, which he believes has not been recognized till now, and which he considers to be frequently the only cause of a condition often complained of by women, viz., pains usually in the right, rarely in the left, side. A diagnosis is frequently made of nephroptosis, appendicitis, ovariosalpingitis, etc., and operations appropriate to the diagnosis are performed without relief. The real condition is displacement of the rib. In consequence of the slanting disposition of the ribs, it happens that sometimes the eleventh or the tenth rib presses on the iliac crest and the ribs even ride one over the other, thus causing pain in the iliac region. The pain is dull intermittent, when the patient moves about or walks. On examining these patients there is often found a certain degree of scoliosis, with abnormal disposition of the ribs. Palpation of the flank is not painful. There is no space left between the iliac crest and the border of the ribs. Pressure on the former and on the extremity of the tenth and eleventh ribs is painful. Often the patients suffer if the angles are brought one over the other. Depage can not state the exact cause of the pain, but regards it as analogous to the pain of flat-foot. He considers as the best early treatment, mechanico-therapeutics and carefully selected gymnastics. One year's treatment is necessary for a thorough cure. Corsets are forbidden. In four cases in which suffering was intolerable he performed resection of the anterior extremities of the ribs—the eleventh rib in three cases and both tenth and eleventh in one case. In all cases the cure is perfect. The disappearance of pain can be compared to the relief one feels on taking off a boot when suffering from corns. Depage regards the success of treatment as an evident proof of the reality of the disease.

Medical Press and Circular, London.

September 30.

25 *Dangers of Hyperalimentation of the Tuberculous. Prof. M. Labbe.
26 *Diabetic Régime. S. A. Arany.
27 Impressions of the First International Food Congress. L. M. Douglas.
28 Gangrene of the Skin in Rheumatoid Scarlatina. Prof. Heubner.

25. Hyperalimentation of the Tuberculous.—Labbe holds that hyperalimentation is indicated only in comparatively few cases, even among tuberculous subjects who are actually losing flesh. It does not constitute a curative treatment of tuberculosis, and therefore can not be indefinitely prolonged. Instead of the doctrine of systematic, indefinite hyperalimentation, he would suggest periodical, interrupted overfeeding, with a selection of cases. In the intervals these patients can be given a diet which shall be substantial, restorative and sufficient to fulfill the requirements of the organism.

26. **Diabetic Régime.**—Arany points out that the way of living that suits diabetic Brown does not necessarily suit diabetic Smith. He divides patients into two categories: The first of these represents cases in which the sugar is entirely derived from carbohydrates, and this class of cases is usually styled alimentary or mild form of diabetes, or the first stage of the disease; whereas to the second category belong cases in which the production of sugar can not be ascribed to the carbohydrates alone, and such cases are usually termed the grave form of diabetes, or the second stage of the disease. The first class has two varieties, those in which glucose appears in the urine only when sugar is ingested as such, and those in which it appears after the ingestion of starchy food. He discusses the food régime suited for the various conditions, and points out that during the colder seasons of the year carbohydrates and albumin must be re-established, and it will be advisable to add to the diet a fair amount of fat stuff. He never withdraws alcohol from those who are accustomed to it, though he never advises a total abstainer to take it, and it is to be given more liberally in winter than in summer. The patient must be protected from greater loss of heat. As to drugs, he considers the disadvantages of opium and its derivatives too great and regards the salicylates as not only more harmless, but far more effective. Alkalies, especially in the form of mineral waters, are useful. With regard to treatment, he says: "To leave the worries of ordinary life at home and to live only for one's health and pleasure is an improvement in itself, and if we add to this open-air life, with plenty of bodily exercise, we certainly do the patient more good in the course of four weeks than we could do at home for him in four months."

Clinical Journal, London.

September 30.

29 *Exploration of the Inguinal Canal. C. B. Lockwood.
30 Rôle of Gastroenterostomy in Gastric Ulcer and Gastrectasia. F. S. Bishop.
31 *Early Clinical Types of Certain Diseases. W. Trotter.

29. **Exploration of the Inguinal Canal.**—Lockwood advises exploration of the inguinal canal in certain conditions. He points out that on the commencement of a hernial protrusion, a very slight elevation may be observed at the site of the internal abdominal ring, accompanied by a small localized impulse on coughing, often too slight to be felt when the patient stands up. As indications for exploration of the inguinal canal, he mentions a complaint of pain in that region with this minute, and almost imperceptible impulse, a patulous ring, scrotal and inguinal varicocele, congenital hydrocele and ill-descended testes.

31. **Early Clinical Types.**—The diseases discussed by Trotter, with a view to describing early clinical types, are carcinoma of the breast, traumatic compression of the brain, malignant disease of the thyroid, and actinomycosis of the lung.

Australasian Medical Gazette, Sidney.

August 20.

32 *Early Diagnosis of Plague. J. S. Purdy.
33 *Resection of Portion of the Liver. T. Fiaschi.
34 *Axis Traction Forceps vs. Telephone and Motor Car. J. K. Couch.
35 Foreign Bodies in the Esophagus. A. M. Cudmore.
36 Surgical Notes. F. H. Burkitt.
37 *Aortic Aneurism Relieved by Calcium Chlorid. T. Ambrose.

32. **Early Diagnosis of Plague.**—Purdy says: "The existence of fever, a swelling in the right groin, with enlargement of a femoral gland or glands, when there is no obvious cause for such enlargement, such as an abrasion or sore lower down the limb, is to my mind a case which should immediately arouse a suspicion as to the possibility of plague. Especially is this suspicion warranted if therewith you have lassitude; frontal headache; vomiting; aching of the limbs; vertigo; drowsiness, with intervals of wakefulness; absence of rigors; a peculiar facial appearance, making the features drawn and haggard, with the pupils dilated, and a general expression of anxiety and fear; anorexia; a rapid rise of temperature to 102 or 103 F., with acceleration of pulse and respiration; a skin dry and burning; tongue with a creamy fur which rapidly dries and becomes brown; intense thirst; extreme prostration; and the presence of a distinct bubo, with infiltration of the tissues, painful to touch—the size of a walnut or larger. If with this you find the epitrochlear glands are not enlarged, I submit that the diagnosis of plague is one within the bounds of reasonable probability."

33. **Resection of Portion of Liver.**—Fiaschi reviews the literature of hepatic surgery, and reports two cases, one of gumma and one of hydatid cyst radically excised. He used Garrè's method, with osteoplastic arch according to W. Meyer's method (THE JOURNAL, Oct. 6, 1906, p. 1069). Before operation and during the after-treatment, both patients were given hexamethylenamin by the mouth, and in 5-grain doses three times a day, which he considers a great help in all cases of liver operation, as it prevents infection of the biliary ducts.

34. **Axis-Traction Forceps.**—Couch protests against meddlesome midwifery, and urges the practice of abdominal examination, pelvimetry and auscultation, and suggests that during the greater part of a normal labor the physician should go away, lest he be tempted to unnecessary interference, and should rely on the telephone and the motor car to save his time instead of on the high forceps operation.

37. **Calcium Chlorid in Aortic Aneurisms.**—Ambrose reports a case in which, after weeks of treatment with potassium iodid, morphin, etc. the pain, throbbing and insomnia were steadily increasing. Improvement commenced almost immediately on taking calcium chlorid three times a day, and continued so that about two months later all symptoms, save an occasional slight headache, had entirely disappeared. The aneurism was clearly visible under the *x*-ray.

Intercolonial Medical Journal of Australasia, Melbourne.

August.

38 Cystoscopy. J. Smith.
39 Recent Dermatology. H. Lawrence.
40 Two Cases of Paget's Eczema of Nipple Associated with Carcinoma. R. B. Duncan.
41 Immediate Treatment of Infantile Paralysis. W. MacKenzie.
42 Surgical Treatment of Sciatica. J. Murphy.

Annales de Médecine et Chirurgie Infantiles, Paris.

September 15, XII, No. 18, pp. 613-648.

43 *Characteristics of Infections and Intoxications in Infants. (Le nourrisson.) A. B. Marfan.

43. **Characteristics of Infections and Intoxications in Infants.**—Marfan continues his general study of the pathology of childhood, discussing the origin of the principal affections of early infancy. He insists on the importance of infection through the skin while it is still defectively developed, less resistant than later, and with a special predisposition for suppurative inflammation. Disturbances in digestion and nutrition may favor infection of the skin by inducing morbid sweating and sudoral eruptions or by producing a cachexia which throws down the barriers for the defense of the skin.

Presse Médicale, Paris.

September 16, XVI, No. 75, pp. 593-600.

44 Starch Digestion in the Stomach and Intestinal Digestion. (Pouvoir amylolytique du contenu gastrique et digestion intestinale.) L. Meunier.
45 Physiologic Action of Muscles of the Hip. (Gymnastique de la hanche.) P. Desfosses.

September 19, No. 76, pp. 601-608.

46 Pubiotomy versus Symphyseotomy. (Hébotomie ou symphyséotomie?) C. Jeannin.
47 Study of Injected Stained Bacteria. (Action de bactéries colorées.) F. Dasis and R. Devloo.

September 23, No. 77, pp. 609-616.

48 *Death After Tapping Ascites. (Mort des ascitiques après la paracentèse.) M. Perrin.
49 Typhoid Fever with "Intermediary" Bacilli. M. Lafforgue.
50 Apparatus for Ethylchlorid Anesthesia. H. Vennin.

48. **Death After Tapping Ascites.**—The paracentesis may prove fatal, Perrin states, by inducing a "serous anemia" from transudation into the empty peritoneal cavity; by inducing or aggravating jaundice; by hemorrhage from the abdominal wall or into the digestive tract, or by dilatation of the heart from the influence of the vacuum produced by the falling diaphragm. These mishaps may occur even when the paracentesis is done with extreme care, and the family should be warned of the possibility, and the patient should be kept un-

der constant supervision so that hemorrhage or heart disturbances may receive proper treatment at their first onset. The patient should always be tapped reclining, with a trocar of small caliber, and a tight bandage should be applied around the body, worn for a week at least or longer if the patient gets up. Before tapping, the state of the heart should be investigated and tonics given as needed, and in case of cirrhosis, the diet should be modified and treatment instituted—never being content with half measures. Perrin adds to these remarks a description of some cases of the various complications that may be observed. The "serous anemia" may develop after a single paracentesis; one of his patients, a man of 63, with alcoholic atrophy and cirrhosis of the liver, required tapping three months after the first symptoms of the ascites. The paracentesis was followed by emaciation of the face, drawn features, leaden complexion, dryness of the skin and general weakness—the typical clinical picture of serous anemia, and death ensued in coma in two weeks after the single puncture. In another more chronic case the patient refused to allow tapping, and he succumbed three months later with the same symptoms, although no puncture had been made. Appropriate dieting and treatment for the cirrhosis in time seems to be the only way to ward off the possibility of this serous anemia. In two other cases in Perrin's experience, puncture was followed by severe icterus and hemorrhages in the digestive canal. Hemorrhage from the abdominal wall with no external signs or in the intestinal canal should be borne in mind in case the patient shows much depression; a ligature or systematic compression may arrest this hemorrhage, and in prevention the evacuation should be done very slowly with a tight bandage around the trunk immediately afterward to reduce the effects of the change in the pressure within the abdomen. In three cases the pulse and heart became immediately weak and irregular after the puncture, and two of the patients succumbed to acute dilatation of the heart, while in a third case the collapse was arrested by tight belting and heart stimulants. The ascites recurred later, but preliminary heart tonics prevented disturbance when the patient was tapped. It was the seventeenth tapping this time, and twelve liters of fluid were evacuated without mishap. Dieting, administration of liver extract and the heart tonics tided this patient past the puncture; he is a man of 55, with old chronic cirrhosis of the Laennec type, but in fairly good condition since. As the fluid is evacuated, the diaphragm sinks down, thus forming a vacuum in the chest which entails acute dilatation of the heart in case it is feeble from any cause, the typical symptoms liable to prove rapidly fatal unless controlled in time. Tight belting tends to prevent this dropping of the diaphragm with all its consequences.

Semaine Médicale, Paris.

September 23, XXVIII, No. 39, pp. 457-468.

51 *Defective Development of the Uterus. (De l'hypoplasie utérine.) R. de Bovis.

September 30, No. 40, pp. 469-480.

52 *Surgery of Cancer at the Dawn of the Twentieth Century. (Chirurgie du cancer au début du vingtième siècle.) F. Lejars.

51. **Defective Development of the Uterus.**—De Bovis gives a comprehensive summary of the literature on this subject in various countries, and discusses the possibilities for medical aid. The knowledge of uterine hypoplasia throws light on many general symptoms and explains recurring abortion, rigid cervix, retention of fetal membranes, etc. In case of a tumor in the breast, of dubious nature, the discovery of infantile uterus inclines the scale in favor of a better prognosis. He protests against the too current assumption that because a woman is a virgin all is well in her genital organs. The outlook for treatment depends on the degree of malformation. Pregnancy has generally an excellent effect; by the hypertrophy, dilatation and altered circulation in the genital organs they are trained to a better development. Treatment to be effectual should imitate this process. Periodical temporary dilatation may prove useful; once a month is often enough, but electricity might be combined with it once a week. Possibly scarification of the cervix might aid the therapeutic process, completed by hot sitz baths and prolonged hot douches, with operative fixation of the uterus and correction of displacement as is found to be indicated.

52. **Surgery of Cancer at the Dawn of the Twentieth Century.**—In this long article Lejars sets down his impressions from the international surgical congress held at Brussels in September. What seems to have impressed him most were the maps showing the number of "cancer houses" and "cancer districts" in certain parts of Germany. They seem to sustain Roswell Park's views in regard to the infectious character of cancer. The parasitic theory, Lejars says, certainly best explains the evolution of cancer and its anomalies and the results of therapeutics. The recurrences after many years show that the term "cures" should be substituted by the term "non-recurrences." The operation should remove the cancer and the routes by which it spreads, all in one block, so as not to sow cancer cells around. It is needless to cut out quantities of tissue haphazard, injuring nerves and vessels—the principle is to remove only the cancer and the routes by which it spreads and the entire suspicious zone. The main thing is an early diagnosis, followed by immediate removal of the growth, while still localized and regional. Lejars adds: "The road is still very steep and very dark, but we must push on waiting for the day when light will break, and take advantage of every little gleam." The number of "absolute cures" reported by various surgeons proved smaller than anticipated. Czerny, for instance, said that in his 450 operations for cancer of the stomach, only 3 of the patients are still living of those operated on before 1898, and only 7 out of 72 treated by gastrectomy between 1898 and 1903. Uterine cancer, removed by the abdominal route, gives an average of about 18 per cent. of durable non-recurrences, according to the various statistics presented.

Archiv für klinische Chirurgie, Berlin.

LXXXVII, No. 2, pp. 257-495. Last indexed October 10, p. 1286.

53 Resection and Plastic Operations on Upper Esophagus, Especially for Carcinoma. (Resection und Plastik am Halsabschnitt der Speiseröhre.) v. Hacker.
54 Gleich's Operation and Its Value in Treatment of Flatfoot. (Therapie des Plattfusses.) O. v. Frisch.
55 Anatomy of Hernia of Brain. (Anatomie der Cephalocelen.) H. Salzer.
56 Primary Sarcoma in Empyematous Gall Bladder. G. Parlavecchio.
57 *Postoperative Lung Complications of Nature of Embolism. E. Ranzi.
58 *Action of Constriction Hyperemia on Animals. (Wirkung der Blindenstauung im Thierexperiment.) P. Frangenheim.
59 *Acromegaly and Hypophysis. E. Stumme.
60 Treatment of Complications from Injury of Lungs in Simple Fractures of the Ribs. (Behandlung der durch Lungenverletzung bei subcutanen Rippenbrüchen enstandenen Complicationen.) F. König.
61 Stones in the Kidney. (Nierensteine.) O. Zuckerkandl.
62 Treatment of Cervical Spondylitis. H. Lehr.

57. **Postoperative Pulmonary Embolism.**—Ranzi states that embolic complications in the lungs were observed in 57 out of a total of 6,871 operations in von Eiselsberg's service at Vienna since 1901. In 23 cases the fatal embolism did not become infected; in 20 cases there were infarcts, and in 14 there were embolic-suppurative processes. He classifies this material under various headings and according to the various operations. There were pulmonary complications in 263 cases, that is, 3.8 per cent., but of embolic nature in only 0.8 per cent. A laparotomy had been done in 24 and herniotomy in 12 of the embolic cases. In the 23 fatal embolic cases death occurred in a few minutes from the first symptoms of the embolism in 5 cases, while in 9 several hours elapsed before the fatal termination. In 3 the symptoms of embolism were observed immediately after the operation. In this group operative intervention for removal of the embolus could scarcely be considered, as the patient is too much exhausted from the first operation to stand another severe one, but in the other groups, after failure of other measures, Trendelenburg's suggestion to remove the embolus by opening the artery might prove useful. In prophylaxis of embolic disturbances, it is well, Ranzi says, to prepare the patient for the operation with some heart tonic and afterward to insist on breathing gymnastics, changing the position of the thorax occasionally, with light massage of the extremities. If these are done systematically it is not necessary to allow the patient to get up early after a

laparotomy, which is dangerous for various reasons, he thinks. On symptoms of embolism, complete repose, heart stimulants and morphin for the lung symptoms may ward off danger, but if all these fail, operative interference is justified. It was tried in one case, as he describes in detail; the patient was a young man of the thymus-lymphatic habit, requiring the Bassini operation for varicocele and gaping inguinal canal. The embolism developed on the second day with sudden, alarming symptoms. Anesthesia was not necessary, as the patient was unconscious and the operation was undertaken in a few minutes after the first symptoms. Two clots were extracted about 5 cm. long and one 10 cm. long from the pulmonary artery. The left branch was then free, but it was not certain whether the right branch was also free; as the wound began to bleed, the operation was hastily concluded. The heart beat freely again at once, although irregularly. The greatest difficulty was experienced in suturing the artery, as the blood at first oozed between the stitches, requiring a second suture; in spite of the stimulants the heart action gradually declined and stopped completely about forty minutes after the first symptoms of embolism. Autopsy revealed that the right branch was in fact still occluded, the clot extending into the smallest ramifications.

58. **Hyperemic Treatment Applied to Wounds on Animals.**—Frangenheim gives illustrations of part of his extensive experiments on animals, the results being decidedly unfavorable to constriction hyperemia as a therapeutic or preventive measure in inflammation. It proved impossible to arrest or prevent inflammation by application of the constricting band. Comparison with control lesions on symmetrical parts showed invariably that the progress of the lesion and inflammation with resulting sequesters was much more serious on the side to which the constricting band had been applied.

59. **Acromegaly and Hypophysis.**—A young woman developed chlorosis, with irregularities in the menses, and soon violent headache became installed with the characteristic signs of acromegaly, diplopia and enlargement of soft parts. Roentgen examination confirmed the assumption of a tumor of the hypophysis, and it was removed by turning back the nose. An ingenious contrivance is illustrated showing how the region was tamponed to allow free respiration while preventing aspiration of foreign matter. The various operations on the hypophysis on record, with the different technics, are reviewed and the pathology and pathogenic importance of the hypophysis discussed. Stumme is convinced that the chlorosis is the primary trouble in such cases, and that it is intimately connected with the functioning of the ovaries. The ovaries suffer from the chlorosis, and this in turn has an injurious action on the hypophysis, altering its secretions, which, in turn, entails the acromegaly. The results of operative treatment in the case reported were satisfactory. To date, six months after the operation, there has been no recurrence of the previously incessant tormenting headache; the soft parts have returned to about normal size, the tendency to growth of hair on cheeks and forearms has subsided and menstruation is regular. The patient complains only of palpitations on slight effort. The thyroid had been unusually large since the first onset of the acromegaly, but the neck measures much less now than before the operation. The thyroid, however, has continued to enlarge and the patient fears goiter.

Beiträge zur Klinik der Tuberkulose, Würzburg.

X, No. 3, pp. 225-278. Last indexed October 3, p. 1192.

63 *Morbid Local Tenderness a Sign of Incipient Pulmonary Tuberculosis. (Der krankhafte Druckschmerz—ein Erkennungsmittel der beginnenden Schwindsucht.) K. Francke.

64 Treatment of Tuberculosis with Injections of Eucalyptol. M. Berliner.

65 *Newer Viewpoints in Treatment of Pulmonary Tuberculosis. (Neuere Gesichtspunkte bei der Behandlung der Lungentuberkulose.) H. Weber.

66 *Influence of Artificially Induced Pneumothorax on the Tuberculous Lung. (Einfluss des künstlichen Pneumothorax auf die tuberkulöse Lunge.) F. Graetz.

67 Further Success with Intravenous Treatment of Tuberculous Patients with Cinnamic Acid. (Intravenöse Behandlung Tuberkulöser mit Hetol.) S. Goldschmidt and N. Knobel.

63. **Morbid Local Tenderness a Sign of Incipient Pulmonary Tuberculosis.**—Francke has been calling attention since 1901 to the importance of study of the local tenderness or what he calls "morbid pressure pains," especially for the diagnosis of incipient apical processes. Before any other signs suggest a tuberculous process at the apex, the region will be found sensitive on percussion or there may be spontaneous pain. This is more liable to occur when the process is toward the front and low, in which case the pleura is liable to be spontaneously painful, on account of the rubbing and traction inevitable from the tuberculous process. When located high up posteriorly the parts then do not participate in the respiratory movements so much, and consequently the process may cause no symptoms, except this tenderness on pressure. He ascribes great importance to this "algeoscopy," as he calls the investigation of the pain on pressure. The patient may exclaim at the pain or make a grimace, or there may be merely a contraction in adjoining muscles. In some cases the pressure on the incipient process may induce a cough. He prefers to apply the pressure with the right forefinger or a special percussion hammer. The muscles must be relaxed and it is remarkable, he says, how elastic the wall of the chest is found to be. The most important point for applying pressure is over the anterior layers of the trapezius muscle, which can be easily pushed aside. The pain of a tuberculous process is readily differentiated from that of rheumatism, neuralgia and affections of the bronchi. The pain is the result of involvement of the adjoining pleura, which is richly provided with nerves. In 200 cases of pulmonary tuberculosis he found this pain on pressure in 77.9 per cent. In 126 of 154 incipient cases, this local tenderness helped to differentiate the incipient process, and the course of the affection always confirmed the findings; only one-third of these patients complained of spontaneous pains. A diagram shows the most common localization of the tenderness; he paints the region with iodin to compare it with the findings later.

65. **Lime and Production of Carbon Dioxid in Relation to Treatment of Tuberculosis.**—Weber bases his treatment on the antagonism between arteriosclerosis and pulmonary tuberculosis. The main difference, he says, is that the blood of the tuberculous is thin and contains very little carbon dioxid, while in arteriosclerosis the blood is thick and contains a large proportion. He believes that the lack of carbon dioxid is what gives the tubercle bacilli their opportunity. As the apex of the lungs is drained more readily of blood than other parts of the lung, it is the point where the bacilli are able to colonize with the greatest ease. In heart disease causing venous hyperemia in the lungs there is less liability to pulmonary tuberculosis, while children born with stenosis of the pulmonary artery all succumb to consumption because the constriction of the artery prevents the normal supply to the lungs of blood containing a large proportion of carbon dioxid. The healing of tuberculous processes in the bones under Bier's technic, he ascribes to the action of carbon dioxid. The benefits of sanatorium treatment of tuberculosis are also attributable in part to this gas as the dietetic measures enforced increase its formation. In diabetes a large part of the sugar is not oxidized but eliminated as sugar. The formation of carbon dioxid is thus interfered with and nearly 50 per cent. of all diabetics succumb to tuberculosis. Treatment of tuberculosis should aim to increase the appetite and render digestion perfect, thus promoting oxidation. Creosote in minute doses stimulates the digestion and appetite, but the mistaken idea that it acts directly on the tubercle bacilli led to its being used in large doses, which injured the stomach and brought the whole method into disrepute. Janowski urges that every patient with stomach trouble should be examined for an apical process in the lungs. A number of stomach symptoms vanish under successful treatment of a tuberculous process in the lung, showing that they were the results of functional disturbances from irritation of the vasomotor nerves by the tuberculous toxins, causing local ischemia of the gastric mucosa, besides a tendency to chilliness, sweats, flushes and neurasthenic disturbances. Creosote and its derivatives in combination with arsenic often induce a remarkable change in the stomach symptoms. A prominent feature of the healing of a tubercu-

lous process is the calcification which arrests the process. It is aided by therapeutic administration of lime salts, and the formation of carbon dioxid is promoted by supplying substances in the food which are most easily oxidized. The substance which oxidizes most readily is levulose, which even diabetics can transform into carbon dioxid, but it is too expensive for general use and Weber has found that a pulverized extract of malt answers the same purpose. It can be added to coffee, tea, lemonade, etc., or taken with wine and egg. He is convinced that a combination of the malt extract and a lime salt is destined to prove useful in treatment of tuberculosis, and he cites a few typical cases showing the benefit derived from the malt treatment alone. He has had 60 per cent. of his patients cured or materially improved, and is anticipating still better results from the combined malt-lime treatment, which he has only recently instituted.

66. **Influence of Pneumothorax on the Tuberculous Lung.**—Graetz gives the clinical history and autopsy findings in three cases of pulmonary tuberculosis in which pneumothorax had been artificially induced. In every instance the pathologic findings showed unmistakable healing processes in the compressed lung. The local lesion had been arrested and was progressing to complete cure when death occurred. Healing was manifested in the encapsulation of the cheesy foci and organization of pneumonic processes by connective tissue. The hindrance to the circulation of the lymph prevents absorption of the tuberculous toxins. The therapeutic results of compression depend on the completeness of the pneumothorax induced and the force of the compression. Nodular processes seem better adapted to this method of treatment than the pneumonic type. He adds that the perforation of cheesy foci and extensive pleurisy are dangerous complications liable with this method of treatment. In the first case reported the adhesions prevented a successful pneumothorax and the patient succumbed to the progress of the tuberculosis. In the second case, both lungs were involved and the tuberculous lesion in one lung continued to progress after the process in the other lung had been arrested by compression. It was necessarily imperfect owing to adhesions. In none of these cases was there any evidence of penetration of foreign bodies into the lymph tracts, allowing transportation of particles from the affected zone to other regions, but it can not be denied that this possibility is imminent with this therapeutic pneumothorax.

Berliner klinische Wochenschrift.

September 28, XLV, No. 39, pp. 1749-1792.

68 *Protection of Stomach Against Autodigestion, and Antipepsin for Treating Gastric Ulcer. (Schutz des Magens gegen die Selbstverdauung.) M. Katzenstein.
69 *Idiopathic Form of Circumscribed Serous Spinal Meningitis. L. Bruns.
70 *Blood Findings in Exophthalmic Goiter and Thyroidism. (Blutefunde bei Morbus Basedowii und bei Thyreoidismus.) L. Caro.
71 *Ascending Neuritis. G. C. Bolten.
72 *Tabes and Paralysis in Light of Recent Research on Syphilis. F. Lesser.
73 Nitrite Intoxication from Bismuth. (Nitritvergiftung durch Bismutum subnitricum.) J. Nowak and C. Gutig.
74 Potassium Iodid in Treatment of Suppuration in Nasal Accessory Cavities. (Jodkalitherapie bei Eiterung der Nasennebenhöhlen.) H. Hempel.
75 Acute Dilatation of the Heart. (Zur Frage der acuten Herzerweiterung.) Hornung.
76 Experiences with Moro's Tuberculin Salve Reaction. (Erfahrungen mit der Moro'schen Reaktion.) A. Lejeune.
77 Institutions for Caring for Mothers and Infants. (Versorgungshäuser für Mütter und Säuglinge.) W. Hanauer.
78 Forensic Aspects of Ovulation and Pregnancy. (Ovulation und Schwangerschaft in ihrer Bedeutung für die forensische Psychiatrie.) H. Marx.

68. **Protection of Stomach Against Autodigestion.**—Katzenstein gives an illustrated description of experiments on dogs, reproducing the natural processes to some extent. A loop of intestine was made to protrude in the stomach or a pedunculated flap from the spleen. The foreign body in the stomach in each case was rapidly digested. On the other hand, it was found that a pedunculated flap of stomach tissue could be drawn around into the stomach and sutured to protrude inside without being digested. It is evident that living tissue is digested by the natural gastric juice in the individual's own stomach, unless it is tissue that produces the gastric juice or is normally laved by it, such as the tissue of the stomach and duodenum. This property of resisting autodigestion was noted both with living and dead stomach tissue. He believes that this resisting property is due to the presence of an antiferment, an antipepsin, and that a morbid lack of this antiferment explains the production of gastric ulcer and its lack of tendency to heal. He treats ulcer of the stomach on this basis, supplying the missing antiferment in the form of an antipepsin, and reports excellent results.

69. **Circumscribed Spinal Serous Meningitis.**—Bruns diagnosed at first caries of the cervical vertebræ in a youth of 16, but later ascribed the paralysis and pains to a tumor, compressing the spinal cord. On removal of the arches of the fourth and fifth cervical vertebræ the cerebrospinal fluid gushed in a strong stream, but nothing pathologic could be found except that the dural sac was exceptionally wide at this point. It thus proved to be a typical case of circumscribed spinal serous meningitis; after evacuation all the symptoms gradually retrogressed so that now, twenty months later, the patient is completely cured.

70. **Blood Findings in Exophthalmic Goiter.**—Caro tabulates the findings in 14 typical cases, in 20 others with a suggestion of exophthalmic goiter, in 6 patients with goiter alone, in 1 patient years after recovery from exophthalmic goiter, and in 5 cases in which thyroid treatment was being taken for obesity or myxedema. The pronounced cases of exophthalmic goiter were distinguished by a reduction of the polynuclear leucocytes, as much as 50 per cent., and a corresponding increase in the mononuclear leucocytes with predominance of the small lymphocytes.

71. **Ascending Neuritis.**—Bolten reports five cases and discusses the history of this affection. The prognosis is favorable with perineuritis without loss of the axis cylinder, also in interstitial neuritis, but the outcome is very dubious in parenchymatous neuritis from penetration of infectious germs through a lesion in the skin into the nerve fibers themselves. In such cases the axis cylinder is always more or less degenerated.

72. **Importance of Serum Test for Tabes and Paralysis.**—Lesser states that the serum test for syphilis is providing a valuable guide to treatment and prevention of tuberculosis and paralysis. Recent life insurance statistics show that a third of all syphilitics die ultimately of tuberculosis, paralysis or aneurism of the aorta. The serum test gave positive findings in all the cases of paralysis and in half of the cases of tabes, in Lesser's experience, and he draws the conclusion that syphilitics who do not respond to the serum test years after their infection are not liable to develop paralysis. About half of the syphilitics who seem to be entirely free from manifestations of the infection years later still respond with positive findings to the test. The conclusion seems evident that these persons, although apparently healthy, are in reality candidates for paralysis later. A positive reaction indicates that the syphilitic virus is still active. Those individuals giving positive findings require specific treatment. In nearly every case in his experience, energetic prolonged specific treatment transformed the positive into a negative response to the test, and this negative phase has persisted to date. The number of inunctions or injections required varies with each patient, and should be controlled by examination of the blood. He accomplished this result in some cases with potassium iodid alone, and he is confident that in this way it will prove possible to reduce the number of cases of tabes and paralysis. Once developed, antisyphilitic treatment has comparatively little influence on their course, but still he would institute specific treatment in case of a positive reaction in a tabetic to ward off the danger of paralysis.

Deutsches Archiv für klinische Medizin, Leipsic.

XCIV. Nos. 1-2, pp. 1-238. Last indexed September 19, p. 1041.

79 *Connection between Contracted Kidney and Hypertrophy of Heart from Standpoint of Pathologic Anatomy. (Beziehungen der Schrumpfnieren zur Herzhypertrophie vom pathologisch-anatomischen Standpunkt.) L. Jores.
80 Influence of Hydrochloric Acid on Digestion of Pepsin. (Einfluss der Salzsäure auf die Pepsinverdauung.) A. Müller.
81 *Physiology and Pathology of Secretion of Pancreatic Fistula. K. Glaessner and H. Popper.

82 *Peripheral Action of Active Exercise on Circulatory Disturbances with Fat Heart and Allied Conditions. (Zur Frage der peripheren Wirkungen der aktiven Gymnastik auf Kreislaufstörungen bei Fettherz und verwandten Zuständen; Zugleich ein Versuch veränderter Auslegung der Krankengeschichte Oertel's.) K. Hasebroek.
83 *Influence of Different Colored Light on Course of Inflammation. (Einfluss einzelner Lichtarten auf den Verlauf der Entzündung.) P. W. Jezierski.
84 *Pathology of Metabolism of Water and Salt. (Pathologie des Wasser- und Salzstoffwechsels.) A. Bittorf.
85 Hemophilia. P. Morawitz and J. Lossen.
86 *Chronic Gastrointestinal Dyspepsia and Chronic Dyspeptic Diarrhea. (Chronische Magen-Darmdyspepsie und chronische dyspeptische Diarrhöen.) R. Schütz.
87 Substances in Urine that Induce Mydriasis. (Vorkommen mydriatisch wirkender Substanzen im Harn.) M. Diem.
88 Perpetually Irregular Pulse. H. E. Hering.
89 Electrocardiogram of Irregular Pulse. Id.
90 Embolic Tuberculous Pneumonia Following Massage of Tuberculous Glands in Neck. Aufrecht.

79. **Relations Between Contracted Kidney and Hypertrophy of the Heart.**—Jores has been studying the pathologic anatomy of this question, his conclusions being against the assumption that the degree of hypertrophy is determined by differences in the destruction of kidney tissue. It seems much more probable that in the still unknown injurious influence which induces the production of red granular kidney, for instance, there is a strong blood-pressure raising element.

81. **Secretion of Pancreatic Fistula.**—Glaessner examined the secretions from a traumatic fistula into the pancreas in a girl of 17. For nearly three weeks the secretion was collected every hour and studied from several points of view. The findings showed a number of differences from those of a pancreatic fistula in the dog, especially the lack of the lab ferment, the continuous secretion of pancreatic juice, the lack of correspondence between the nature of the food and the nature of the secretion, and the absence of any apparent influence on the production of pancreatic juice by special elements in the food.

82. **Peripheral Action of Active Exercise in Circulatory Disturbances.**—Hasebroek relates experiences and tests which sustain his assumption that the benefits of active gymnastics in cases of fatty heart and allied conditions are due in part to the training of the muscles of the skeleton and vessels, but mainly to the sweeping away of obstacles accumulated at the periphery. The retrogression of the peripheral resistances is due possibly in some measure to reduction in the viscosity of the blood. When therapeutic gymnastic measures produce rapid and striking benefit, especially in fatty heart and allied conditions, it is extremely probable that the disturbances relieved were essentially extracardial.

83. **Influence of Colored Light on Course of Inflammation.**—Jezierski reports experimental research, especially on frogs and mice. The results indicate that the influence of blue light resembles that of diffuse daylight, acting mainly on the leucocytes, less on the red corpuscles and the cells of the epidermis. Red light has less action on the leucocytes, but it induces hyperemia, causing better nourishment of tissue, and by promoting the regeneration of the epidermis, protects the inflamed surface and contributes to its smooth healing free from scar formation.

84. **Pathology of Metabolism of Water and Salt.**—The metabolic findings in seven cases of dropsy are tabulated in detail. They confirm the importance of changes in the vessels as the main cause of edema. Without these changes there may be considerable retention of water or salt or both, without dropsical accumulations. If the changes in the vessels are permanent, chronic edema results. Bittorf's experience speaks against the assumption of primary retention of salt as the sole or even as an important cause of edema. The changes in the vessels and retention of water are far more important factors in the production of edema than retention of salt. Improvement in a kidney affection with edema is first manifested in an increased elimination of salt, followed by increased elimination of water. When this occurs, ingestion of salt may promote the elimination of salt and water by accelerating the osmotic interchanges between the tissues and the blood. His experience further shows the uniformity of the origin of nephritic and cardial edema. In both there are injury of the vessels with local disturbances in the circulation and retention of water from disturbance in the circulation through the kidneys with lesser elimination of water. The various localizations of the edema in each are the result of the different vessels affected.

86. **Chronic Gastrointestinal Dyspepsia.**—Schütz claims that chronic "nervous dyspepsia" and dyspeptic diarrhea are the result always of some disturbances in the secretion, absorption or bactericidal functions of the digestive tract. He has had occasion to treat 143 adults and 12 children for this trouble. Nearly all complained of long chronic diarrhea assumed to be of gastric origin. The diagnosis of "dyspeptic" diarrhea is based on the characteristic history and examination of the stool. Treatment is mainly dietetic, allowing only food which the stomach and intestine are capable of digesting without residue. All articles should be discarded from the diet which examination of the stools shows are imperfectly digested, and any return to food with much residue promptly avenges itself. A change of occupation or scene may prove beneficial in obstinate cases; in the severer forms institutional treatment is advisable as examination of the stools is indispensable for correct advice. He never gives drugs to stop the diarrhea unless he finds that it persists from over-irritable peristalsis after the digestion has proved to be proceeding normally. Repose is a necessary factor; in the severer cases the patients require rest in bed for a time and even in the mild cases the patient should lie down for a few hours every day, preferably after meals. Warmth applied externally and in the form of a little hot water taken before meals is important as an adjuvant. Large amounts of water at a time should be strictly forbidden.

Deutsche medizinische Wochenschrift, Berlin.

September 24, XXXIV, No. 39, pp. 1657-1704.

91 Brain Affections with Fatal Outcome Without Anatomic Findings. (Hirnerkrankungen mit tödlichem Ausgang ohne anatomischen Befund.) H. Hochhaus.
92 *Operative Treatment of Traumatic Paralysis from Simple Compression. (Operative Behandlung der traumatischen subkutanen Kompressionslähmungen.) Bardenheuer.
93 *Artificial Auditory Hallucinations in Delirium Tremens. (Künstliche Gehörtäuschungen bei Delirium Tremens.) G. Aschaffenburg.
94 Cutaneous Tuberculin Reaction in Young Infants. (Die kutane Tuberkulinreaktion im ersten Lebensjahr, speziell im ersten Lebenshalbjahr.) F. Siegert.
95 *Value of Sense of Touch in Operating. (Wert des Tastsinnes beim Operieren.) Hopmann.
96 *Physiology of Respiratory Organs. (Physiologie der Atmung sorgane.) G. Liebermeister.
97 Behavior of Vocal Fremitus in Croupous Pneumonia. (Verhalten des Stimmfremitus bei croupöser Pneumonia.) J. Wolter.
98 Technic of Extension Treatment. Schrecker.
99 Origin of Cirrhosis of Liver. (Genese der Lebercirrhose.) H. Ribbert.
100 *Treatment of Convulsions. (Behandlung der Krämpfe.) A. Westphal.

92. **Traumatic Paralysis from Compression.**—Bardenheuer's patient was a roofer, who fell from a roof, crushing the inferior cervical plexus between the clavicle and the seventh cervical vertebra. Bardenheuer's experience in this case, sustained by a survery of the literature, has convinced him that such cases of complete paralysis from a subcutaneous injury require operative intervention if by the second or third week no improvement is observed under medical measures, and if after the tenth or twelfth day the electric irritability for both currents—after a phase of exaggeration—declines to complete extinction, while the muscle loses within a week the power to respond to the faradic current and in the second week becomes more susceptible to the galvanic current with the reaction of degeneration and signs of atrophy. He advocates exposing the nerve in this case and doing a paraneurotomy or suturing the nerve, according to the indications presented.

93. **Auditory Hallucination in Delirium Tremens.**—Aschaffenburg has confirmed Liepmann's discovery that pressure on the closed eyes will produce in delirium tremens a delirium of color perception besides the ordinary Purkinje phenomena. Aschaffenburg has found this a good means to reveal impending delirium tremens before its actual onset. Similar hallucinations were evident in the auditory sphere when the patients were summoned to a supposed city telephone when in fact it was merely a house telephone, with no chance for auditory stimuli. The mere sight of lines on a sheet of paper or mere

contact with the telephone or pressure on the eyeball serve as peripheral stimuli to elicit the hallucinations, confirming the importance of peripheral stimuli in their production, and also the value of such stimuli as a diagnostic measure to detect the inroads of alcoholism before the point of delirium tremens has been reached.

95. **The Finger Superior to Instruments for Exploring.**—Hopmann relates a number of instances to show the superiority of the finger for exploring cavities during operations, revealing sequesters, etc., which escape detection by instrumental exploration. Especially in the cavities of the nose and throat, the trained finger allows detection of lesions and aids in their removal by the natural routes much more effectively than instruments. With the latter an external incision may be required to accomplish the same results as can be obtained with the finger exploring the natural openings.

96. **Physiology of the Respiratory Organs.**—Liebermeister reports research on the mechanism of respiration in case of sudden stenosis of the larynx. His studies were made mostly in postdiphtheric paralysis and in normal conditions. The findings show that interference with breathing causes inflation of the lung if the obstacle to respiration shuts off the air from both lungs. This inflation may develop in the course of a few minutes, and if it continues for a week it does not retrogress after removal of the obstacle, but is liable to entail permanent emphysema. Examination of the lower outline of the lung is thus able to afford instructive information, as it indicates the severity of the obstruction and its persistence in spite of the measures undertaken to relieve it. His experience teaches that delay before relieving the stenosis—by intubation at least—is liable to entail permanent emphysema, which can be avoided sometimes by prompt intervention. In conclusion, he gives the details of the twelve cases studied.

100. **Treatment of Convulsions.**—Westphal commends chloral for arresting an epileptic seizure. It can be administered internally in doses of 2 or 3 gm. (30 or 45 grains), or twice this amount can be given in an enema, preferably in combination with morphin. If the seizure recurs on awakening from the following sleep, the drug should be given again. In hysteria he urges that it must be borne in mind that it is always the psychic suggestive influence of the physician which has a curative action, regardless of the measures employed. The most important factor in treatment of convulsions is differentiation of their cause.

Fortschritte der Medizin, Leipsic.

September 16, XXVI, No. 25, pp. 785-816.

101 Air Baths in Treatment of Consumption. (Indikationen, Technik und Nutzen der Luftbäder in der Phthisentherapie.) G. Schröder.

September 20, No. 26, pp. 817-848.

102 Case of Juvenile Paralysis from Inherited Syphilis. Senkpiel.

Münchener medizinische Wochenschrift.

September 22, LV, No. 38, pp. 1961-2024.

103 *Old Age from Forensic Standpoint. (Das Greisenalter in forensischer Beziehung.) G. Aschaffenburg.

104 *Nervousness in Children in Relation to Their Diet. (Nervosität und Ernährung im Kindesalter.) F. Siegert.

105 *Primary Intestinal Tuberculosis in Adults. (Primäre Darmtuberkulose bei Erwachsenen.) B. Fischer.

106 *Healing Over of Granulating Surfaces Under "Scharlach R" Salve. C. Krajca.

107 The Dread of Operations on the Tonsils. (Die Furcht vor Mandeloperationen.) Hopmann.

108 Treatment of Diphtheria at Cologne, 1900-8. Berlin.

109 *Meningococcus Sepsis. G. Liebermeister.

110 *Recurrences of Croupous Pneumonia. (Rezidive bei kruppöser Pneumonia.) J. Bungart.

111 Disturbances in Conduction of Impulses in the Heart. (Reizleitungsstörungen des Herzens.) E. Mosbacher.

112 *Congenital Syphilis and Progressive Paralysis. C. Müller.

113 *Dangers of Pyroligneous Acid. (Gefahren der Verwendung von sogenannter Essigessenz.) L. Bleibtreu.

114 Portable Shed Barracks. (Shedbarackensystem mit Boxen.) E. Czaplewski.

115 Histologic Diagnosis of Tumors as Basis for Operative Measures. (Sicherheit der histologischen Geschwulstdiagnose als Basis radikaler chirurgischer Eingriffe.) T. Rovsing.

116 Atropin in Treatment of Gastric Ulcer. (Atropinbehandlung des Ulcus ventriculi.) D. v. Tabora.

117 Practical Importance of Opsonic Index in Tuberculosis. K. Turban and G. Baer.

118 Prophylaxis by Cyto-Sera and Pneumonia Infection. (Zytoseroprophylaxe und Pneumonieinfektion.) L. Heim.

103. **Old Age from Forensic Standpoint.**—Aschaffenburg analyzes recent criminal records for Germany involving persons of 70 and over, and comments on the small percentage of deeds of violence and large proportion of verbal injuries and the still larger percentage of deeds of immoral nature. It is his belief that in this latter group the crimes are the results of organic changes in the brain. In one typical case, which he cites, insanity developed during the four-year penitentiary sentence, and the meninges were found adherent to the brain, with the cortex shriveled. In 10 out of 12 of the cases, senile dementia continued a rapid course after the sentence. The frequency of serious mental affections in the aged should be impressed on legal authorities to prevent penalties being imposed when the perpetrator of the deed is a sick man rather than a criminal. It must also be borne in mind that the encroaching dementia shuts off the inhibiting influences which otherwise would prevent the crime, while it may induce a morbid stimulation of the sexual impulses.

104. **Nervousness in Children in Relation to Their Food.**—The nervousness to which Siegert refers occurs in children in well-to-do families kept on what is supposed to be an extra-nourishing diet. When milk is given too exclusively, without vegetables, the child is flabby and anemic, with no appetite, but obstinate constipation. When eggs and milk form the main diet, there is often recurring catarrh of the large intestine, while children who eat too much meat display a tendency to skin affections with great elimination of urates, and vulvitis. When milk, eggs and meat form almost the sole diet, the child looks sallow and miserable, with a tendency to itching eczema and recurring folliculitis, and restless sleep. In every case without exception the child suffers when there is lack of carbohydrates, alkali and cellulose in the diet, with predominance of albumin and fat, and when the total amount of food is inadequate. He says that he has seen about 60 examples of this "overfeeding nervodsness," and relates a few cases. The children are restless day and night, tire easily, and suffer from frequent infections and obstinate constipation, all of which can be banished merely by regulating the diet, restricting the albumin and fat, while ordering vegetables, salads and fruit. He has never failed to discover this defective diet with this "dystrophic nervousness." In some cases high medical authorities had recommended the milk, egg, oatmeal and sugar diet, but without providing for any supply of salt. The recent announcements in regard to the advantages of an exclusive milk diet without salt, for reduction of obesity, confirm again the reasons for loss of appetite in children overfed with milk. He regards eggs as superfluous for children, except as used in preparation of puddings, etc. Vegetable soups, well salted, are important in the diet, with fruit for dessert, cooked for supper. This dystrophic nervousness is never encountered in the hospitals, but in private practice it offers a wide field for gratifying effort.

105. **Primary Intestinal Tuberculosis in Adults.**—Fischer reports three cases in which the autopsy findings revealed primary tuberculosis in the intestines in adults. The first patient was a man of 63, who succumbed to sepsis from injury of a finger. There was nothing to suggest tuberculosis until some lesions were discovered in the intestines indicating a recent primary tuberculous process. In the two other cases there was evidently an old primary intestinal tuberculous affection which finally led to dissemination by the lymphatics with acute and fatal pulmonary tuberculosis as the result. The cases emphasize, he says, the possibility that a pulmonary tuberculous process of air-borne origin may be aggravated and the fatal termination hastened by secondary influences from a pre-existing or coexisting intestinal tuberculous affection. Or it may happen that a tuberculous process may develop in the lungs secondary to the intestinal lesions, entirely independently of a pre-existing lesion in the lungs, which may remain almost latent. It is possible, also, he adds, that tubercle bacilli swallowed from a pulmonary process may find their way back to the lungs through the digestive tract and induce serious lesions outside of the primary pulmonary focus. The importance of warning patients not to swallow their sputum is confirmed anew by these considerations.

106. **Scarlet Red Salve to Promote Healing of Granulating Surfaces.**—THE JOURNAL, November 10, page 1566, mentioned Fischer's announcements in regard to the remarkable proliferation of epithelium under the influence of the dye "Scharlach R." mixed with olive oil. He obtained with it an atypical proliferation which he thought might throw light on the origin of cancer. Schmieden and Kaehler have been applying the "Scharlach R" in the form of an 8 per cent. salve to promote the healing of granulating surfaces, and Krajca here reports favorable results from this treatment of large defects. He applies the salve on mull for twenty-four hours, alternately with a boric acid salve. The results were good when the salve was applied to promote the healing of Thiersch flaps. He gives an illustration of an extensive defect on the foot, including the heel, which healed rapidly under the red salve. In one case the cavity left from a radical mastoid operation healed completely in two weeks. He makes a point of touching with silver nitrate any granulations which seem to be proliferating too much. He urges others to try this scarlet-red salve method, as it promises, he says, to be of practical importance for the widest medical circles.

109. **Meningococcus Sepsis.**—Liebermeister has been able to find in the literature only one other case like the one he reports, in which meningococci were cultivated from the blood while yet there did not seem to be any signs of meningitis. The patient in his case presented all the general symptoms which usually accompany meningitis, and was ill for two or three months with hectic, irregular fever, pains in the joints, slight stupor at times, an exanthem and congestion in the lungs—but the spinal fluid was clear and sterile, and there were no symptoms of actual meningitis. It is possible, he adds, that such cases of meningococcus sepsis without meningitis are more numerous than hitherto supposed, and have been accepted as "influenza" or even as "articular rheumatism."

110. **Relapses of Croupous Pneumonia.**—Bungart's three patients were convalescing after croupous pneumonia, when suddenly symptoms of a renewed onset of the disease were observed, and they passed through what in every respect seemed to be a repetition of their first attack. The shortest interval after defervescence before the relapse varied from three to twenty-six days in the few such cases on record. The site of the primary lesion was also the seat of the relapse or recurrence; it proved relatively mild in the cases on record.

112. **Congenital Syphilis and Progressive Paralysis.**—Müller relates three cases of progressive paralysis developing in persons whose history showed the probability of inherited syphilis. The patients were between 42 and 53 years old. The interval of 42 years in the first case between the infection in the uterus and the outbreak of the paralysis is the longest interval yet recorded. In another case the patient developed symptoms of mild tabes at 18, which gradually improved, but after thirty-five years progressive paralysis became evident, to which he succumbed in a year.

113. **Dangers of "Wood Vinegar."**—Bleibtreu has encountered three fatal cases of poisoning from pyroligneous acid taken inadvertently, and has found 132 fatal cases on record. In some, the "wood vinegar" had been taken with suicidal intent.

Zentralblatt für Gynäkologie, Leipsic.

September 19, XXXII, No. 38, pp. 1233-1264.

119 *Allowing Patients to Get Up Early After Laparotomies. (Frühaufstehen der Laparotomierten.) F. Cohn.
120 *An Inguinal Prolapse Operation. (Exohysteropexie inguinalis.) H. Freund.
121 Methods for Disinfection. (Einige neuere Desinfektionsmethoden.) L. Heusner.
122 *Protection of the Perineum. (Dammschutz.) M. Samuel.

September 26, No. 39, pp. 1265-1296.

123 *Case of Air Embolism with Placenta Prævia. (Paradoxe Embolie.) P. Esch.
124 An Indication for Suprasymphyseal Cesarean Section. (Indikation für den suprasymphysären Kaiserschnitt.) W. T. Wiemer.
125 *Intraperitoneal Shortening of Round Ligaments. (Neue Methode der intraperitonealen Ligamentverkürzung.) W. Latzko.
126 Models of Ten Cross Sections of the Female Pelvis for Topographical Representation of Hemorrhage, Inflammation and Neoplasms. (Modelle von Zehn Durchschnitten Weiblicher Becken.) W. A. Freund and v. Rosthorn.

119. **Allowing Patients to Get Up Early After Laparotomies.**—Cohn allowed 100 patients to get up in the course of the first week after laparotomy, 13 on the first day, 16 on the second day, 21 on the third, 30 on the fourth, 10 on the fifth, 8 on the sixth and 2 on the seventh day, and has been much pleased with the results. Thrombosis occurred in 3 cases, but soon subsided, and the preceding condition was evidently responsible for it. He thinks it necessary to be cautious in allowing patients to get up very early when they had unduly high temperature or disturbances in circulation in the legs or pelvis, but under other conditions he is confident that it is an important progress in the treatment after laparotomies. The moral effect on the patient has a favorable influence on convalescence.

120. **An Inguinal Prolapse Operation.**—This operation is designed for cases in which there is prolapse of vagina and uterus with a large inguinal hernia. The inguinal opening is enlarged, the contents reduced and the uterus is seized through the opening and fastened to the outer edge of the inguinal ring. The principle is similar to that of Kocher's median exohysteropexy.

122. **Protection of the Perineum.**—Samuel has the puerpera flex the thighs, her hands on her breast to exclude straining, while she breathes rapidly and deep. This relieves the perineum from strain to some extent, and the accoucheur's right hand presses on the head from behind the perineum, while the fingers of the other hand can be worked under the chin. The head is worked along by the right hand. The patient lies on her back, and it is impossible for her to strain unless mistaken kindness gives her some support for her hands. The article is illustrated.

123. **Air Embolism with Placenta Prævia.**—Esch remarks that in the eight cases of air embolism with placenta prævia on record, including a case personally observed, which he describes in detail, the air embolism occurred during or immediately after version. He could find no other case in the literature with any other method of treatment of placenta prævia. The version was done with the patient in the dorsal decubitus; in five cases the placenta was partially and in his case totally detached. In prophylaxis the aim should be to open the lumen of the vessels as little as possible. The danger is less when an instrument is used to bore through the membranes, instead of the finger. The breathing during version should be quiet and regular to avoid fluctuations in the abdominal pressure. If the pelvis is raised a little, the air is less liable to be aspirated into the uterus. It is wise also to refrain from drawing the legs up toward the abdomen, as this relaxes the wall and the intestines may slide down against the diaphragm, which is liable to induce negative intraabdominal pressure. It is remarkable, he adds, that air embolism has never been observed with the use of the hystereurynter, which has the further advantage that it does not require general anesthesia.

125. **Intraperitoneal Shortening of Round Ligaments.**—Latzko's technic is readily seen from the four illustrations. The round ligaments are taken up in a loop which is sutured to the uterus along the median line. He has applied this technic in 100 cases of retroflexion, with faultless functional results in every instance, even with subsequent pregnancies.

Gazzetta degli Ospedali e delle Cliniche, Milan.

September 29, XXIX, No. 113, pp. 1193-1202.

127 Pathogenesis of Orthostatic Albuminuria. G. A. Pari.
128 *Glycogen in Sputum and Its Diagnostic Significance. (Glicogeno negli espettorati.) P. Pozzilli.
129 *Treatment of Intolerance of Quinin. (Terapeutica della intolleranza da chinino.) G. Nogara.

128. **Differential Importance of Glycogen in Sputum.**—Pozzilli's experience confirms the assertions of Moscati and others in regard to the unusually large proportion of glycogen in tuberculous sputum. It increases to form 2 or 3 per cent. of the sputum in the advanced stages of the disease, and this loss of glycogen in the sputum must be one factor in the debility of consumptives. It is not demonstrable in the expectoration of simple bronchial catarrh. He tabulates the findings in 25 cases of various affections of the air passages. In

the advanced stage of pulmonary tuberculosis glycogen formed 3.75 per cent. of the sputum in one case, and was never below 2.5 per cent., while it ranged from 0.15 to 0.6 in other stages of pulmonary tuberculosis. None was found in chronic or acute simple bronchitis, and in pneumonia it ranged merely between 0.05 and 0.06 per cent. The highest proportion detected in any non-tuberculous affection—0.25 per cent.—was in a case of putrid bronchitis in a man of 50. The proportion of glycogen may thus prove a valuable aid for differentiation of tuberculosis and for the prognosis. These findings also throw light on the peculiar susceptibility of diabetics to tuberculosis. The glycogen can be demonstrated by the iodin test or by Pflüger's technic. For the former the sputum is rendered slightly alkaline with sodium carbonate, and then heated for an hour to allow the glycogen to dissolve out into the water. The fluid is then filtered and boiled down in the water bath. An iodo-iodid solution (0.25 part of iodin; 0.5 part of potassium iodid and 100 parts water) is poured on the filtrate in a test-tube held very slanting, the iodid solution is allowed to flow down the sides of the tube, but not allowing the two fluids to mix. A mahogany ring forms at the junction of the two fluids in case of the presence of glycogen, while nothing of the kind occurs in its absence. This test reveals even very small proportions of glycogen. The Pflüger technic is somewhat more complicated.

129. **Treatment of Intolerance of Quinin.**—Nogara reports a case of threatening acute malaria in which the necessary quinin caused convulsions with fever whenever it was taken. After ineffectual trials of various preparations of quinin, with the same disastrous results, he decided to place the patient under the influence of morphin plus atropin. Under the influence of these drugs he tranquilly injected up to 15 grains of quinin without further disturbances, which promptly arrested the threatening symptoms.

Policlinico, Rome.

September 20, XV, Practical Section, No. 38, pp. 1189-1220.

130 *Percussion of Changes in Diameter of the Heart and Large Vessels in Various Febrile Affections. (Nuovo metodo di percussione.) N. Trulli.

September 27, No. 39, pp. 1222-1252.

131 *Liver Cough. (Sulla tosse epatica.) E. Jona.
132 *Medical Treatment of Tuberculous Peritonitis. G. Morano.

130. **Percussion of the Heart Region.**—Trulli expatiates on the important findings possible with the method of percussion taught by the school of medical semeiotics at Rome. It is based on nine points: *a*, the right limit of cardiac dulness; *b*, the right margin of the heart; *c*, the upper limit of relative liver dulness; *d*, the heart-liver angle; *e*, left limit of the cardiac dulness; *f*, the left upper margin of the heart; *g*, the angle between the heart and the large vessels; *h*, the left lateral margin of the heart, and, *i*, the lowest point of the heart on the left. By determining these points two triangles are obtained. The base of the larger extends from the heart-liver angle along the right ventricle to the apex; the upper side of this triangle is formed by the left ventricle, the line extending from the apex to the cardiovascular angle. Another line forms the third side of the triangle, extending from the cardiovascular angle to the cardio-liver angle, and forms at the same time the base of the second triangle and the outline for the base of the heart. The other side of the second triangle extends from the heart-liver angle upward; the third side is formed by the width across the large vessels and heart. The length of these various lines gives an instructive picture of conditions in the heart and large vessels, as they all form a functional whole, and dilatation of one part presupposes changes in the other parts. Trulli gives a few examples of measurements taken on these principles which afford a base for comparative study of various affections of the heart and large vessels. In a case of pneumonia, for instance, he found line 1 to be 7 cm. long; line 2, 11 cm.; line 4, 17.5 cm.; line 5, 13 cm., these measurements gradually growing less as convalescence progressed. In a fatal case the measurements were: 7.5; 11; 14, 11, the third day, and the seventh day, just before death, they were: 8.5; 12.5; 16.5; 12.5.

131. **Liver Cough.**—Jona has encountered two cases of enlarged liver, accompanied by aortic insufficiency, but with no signs of any affection of the respiratory organs. In both cases palpation of the liver caused a severe, dry cough, or, when the pressure was slight or very brief, the musculature of the abdominal wall contracted and the respiration was arrested for a moment with congestion of the veins of the neck, but without any actual cough. It is evidently a reflex phenomenon.

132. **Medical Treatment of Tuberculous Peritonitis.**—Morano's patient was a girl of nineteen with signs of tuberculous peritonitis, swollen glands in the neck and inguinal region and a fistula left from an abscess in the breast. He injected a solution of iodin and iodid, according to Durante's technic, adding a little guaiacol. Improvement soon became manifest, and after forty-seven daily injections the patient was cured. The patient has been in the best of health during the five years since, and Morano commends the iodo-iodid solution as at least worthy of a trial in case operative measures are contraindicated.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

Lehmann's Medizinische Handatlanten. Band XVII/I. Atlas und Grundriss der gerichtlichen Medizin, unter Benutzung von E. v. Hofmann's Atlas der gerichtlichen Medizin. Herausgegeben von Dr. Georg Puppe, Professor der gerichtlichen Medizin in Königsberg i. P. Mit 70 vielfarbigen Tafeln und 204 schwarzen Abbildungen. Parts I and II. Price, $5.00 per set. München: J. F. Lehmann's Verlag, 1908.

Taber's Pocket Encyclopedic Medical Dictionary. Edited by Clarence W. Taber, Author of "Taber's Medical Dictionary for Nurses," etc. Associate Editor, Nicholas Senn, M.D., Ph.D., LL.D., C.M., Professor of Surgery, University of Chicago. Third Edition. Flexible Leather. Pp. 418. Price, $1.50. Chicago: Laird & Lee.

Kampen Mod Tæring. Et prisbelønnet skrift af S. Adolphus Knopf, M.D., New York. Professor i phthisiotherapi (tæringsbehandling) ved New York Postgraduate Medical School and Hospital. Translated by A. C. Amundson, M.D., Cambridge, Wis. Paper. Pp. 96. Madison: Amerika Publishing Co., 1908.

The Hard Palate in Normal and Feeble-Minded Individuals. By Walter Channing, M.D., and Clark Wissler, Ph.D. Vol. I, Part V, of the anthropological papers of the American Museum of Natural History. Paper. Pp. 349, with illustrations. New York: Published by Order of Trustees. August, 1908.

Tuberkulose-Arbeiten Aus Dem Kaiserlichen Gesundheitsamte. 8 Heft. Deutsche Heilstätten für Lungenkranke. Geschichtliche und statistische Mitteilungen. IV. Mit 8 Tafeln. Berichterstatter: Dr. Hamel, unter Mitwirkung von Dr. Friedr. Peters. Berlin: Verlag von Julius Springer, 1908.

Diseases of the Nose and Throat. By Cornelius Godfrey Coakley, A.M., M.D., Professor of Laryngology in the University and Bellevue Hospital Medical College, New York City. Fourth Edition. Cloth. Pp. 604, with illustrations. Price, $2.75. Philadelphia: Lea & Febiger, 1908.

The Bone-Marrow. By W. E. Carnegie Dickson, M.D., B.Sc., Edin., F.R.C.P., Edin., Lecturer on Pathological Bacteriology in University of Edinburgh. Cloth. Pp. 160, with illustrations. Price, $12.00. New York: Longmans, Greene & Co., 1908.

Diseases of the Nervous System. By Alfred Gordon, A.M., M.D., Associate in Nervous and Mental Diseases, Jefferson Medical College. Cloth. Pp. 487, with illustrations. Price, $2.50. Philadelphia: P. Blakiston's Son & Co., 1908.

Emergency Surgery. By John W. Sluss, A.M., M.D., Professor of Anatomy, Indiana University School of Medicine. Flexible Leather. Pp. 692, with illustrations. Price, $3.50. Philadelphia: P. Blakiston's Son & Co., 1908.

First Annual Report of the Troy Tuberculosis Class. Maintained by the Society for the Home Treatment of Consumption, Troy, N. Y., 1908. Paper. Pp. 36, with illustrations. Albany, N. Y.: Brandow Printing Co.

The Substance of Faith Allied with Science. By Sir Oliver Lodge, Principal of the University of Birmingham. Cloth. Pp. 144. Price, $1.00. New York: Harper & Brothers.

Military Hygiene. By R. H. Firth, Lieut.-Colonel Royal Army Medical Corps. Cloth. Pp. 299. Price, $1.40. Philadelphia: P. Blakiston's Son & Co., 1908.

Pellagra, a Précis. By Passed Assistant Surgeon C. H. Lavinder. Paper. Pp. 22. Washington: Government Printing Office, 1908.

Eleventh Annual Report, St. John's General Hospital, of North Side, Pittsburg, Pa., for the year 1907. Paper. Pp. 34.

Twenty-Fifth Annual Report of the Medico-Chirurgical Hospital of Philadelphia. 1907. Paper. Pp. 53.